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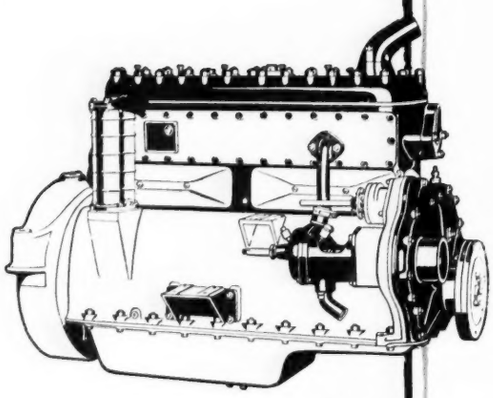

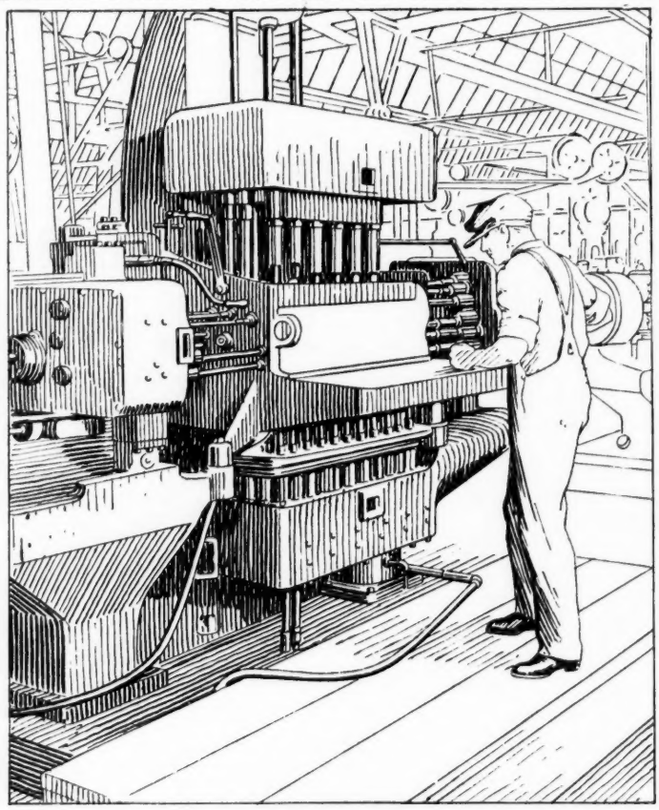

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# Continental Motors

AUTOMOTIVE INDUSTRIES

VOLUME 55 *Philadelphia, Thursday, July 15, 1926* NUMBER 3

# July 1 Registrations in U. S. Show 11.3% Gain Over Year Ago

**19,579,768 motor vehicles listed as in service during first six months of 1926. Total at end of year expected to be near 22,000,000. Florida's gain heaviest.**

*By K. W. Stillman*

MOTOR vehicles registered in the United States on July 1, 1926, totaled 19,579,768, which represents a gain of 1,991,152 vehicles, or 11.3 per cent, over July 1, 1925, according to the annual mid-year survey just completed by *Automotive Industries*.

Of this total, passenger cars and buses contribute 17,172,567 and trucks 2,407,201. The gains made in these two classes of vehicles were almost identical in percentages. Passenger cars gained 1,747,523 over last year's figures, or 11.3 per cent, while trucks gained 243,629, or 11.2 per cent.

Registrations now are within 278,147 vehicles of the total registered at the close of 1925 and with six months yet to go, during which many cars will be produced and sold and many others now in the hands of dealers or unregistered for other reasons will be placed on the registration lists, it seems likely that total registrations for this year will be rather close to 22,000,000 vehicles.

There is now a motor vehicle for each 5.98 persons in the country, basing population upon the Bureau of Census estimates for July, 1926.

Motorcycles continue to decrease in number, the present registration figure being 99,973, which is some 15,000 less than the number registered at this time last year.

### A Gain of 59 Per Cent

Again Florida takes the lead in percentage gains over a year ago with an increase of 59.1 per cent, demonstrating that the real estate business there is still prosperous. In fact, one might be led to the opinion that the boom is growing rather than declining since the percentage increase registered this year is greater by 7.9 per cent than the increase recorded last year over July 1, 1924, registrations. Actual increases have been greater too, of course, Last July the registrations were 87,000 more than the year before while this year's total is nearly 152,000 ahead of last year.

Michigan takes the lead in numerical gains over a year ago with a registration increase of 192,990 vehicles, displacing Texas which held this honor in July, 1925, and New York which led the procession last January.

Close behind Michigan is California with a registration increase of 176,367, with New York making a good third with 173,429 more vehicles than were registered a year ago this time.

Fees paid into the various State treasuries by automobile owners during the first six months of 1926 for licenses totaled $243,612,336, while taxes collected upon the sale of gasoline provided $93,502,577 more. Total license fees collected during the entire year of 1925 were only $244,353,823, or little more than a million greater than those already taken in this year with the year only half gone. Gasoline taxes, likewise, for the whole of 1925 were $126,709,932, not very much greater than the taxes already obtained for six months. It is evident then that the various State treasuries will be enriched by the automotive industry this year to a considerably greater degree than they ever have been in the past.

### Less Than End-of-Year Figure

As was true for the first time last year and is again evident this time, the mid-year registrations are less than those recorded at the preceding end-of-the-year. This appears to be an unusual condition at first sight but there is a fairly good explanation for it. As has been mentioned in articles appearing in this magazine from time to time in the past, the number of cars which are being taken out of service each year is rapidly increasing and has now reached such proportions that it represents a good share of the number of new cars produced each year.

During 1924 there were about 1,500,000 cars scrapped and during 1925 that number was greatly exceeded in all probability, although it will be impossible to ascertain the actual number until complete data for 1926 production and registrations are available. In the registrations published at the end of the year all of these cars which have been scrapped during the year are included. In other words instead of there being 19,858,000 in actual service at the close of 1925, as the *Automotive Industries* registration figures indicated, this only represented the number of cars which had been registered during the year. Of this number well over a million and a half had been scrapped or otherwise taken out of service so that there probably

# Motor Vehicle Registration Statistics, July 1, 1926

| | Total Cars and Trucks | Passenger Cars | Trucks | Motor-cycles | Registration Fees | Gas Tax |
|---|---|---|---|---|---|---|
| Alabama | 213,185 | 186,948 | 26,237 | 450 | $2,132,000 | $895,000 |
| Arizona | 75,000 | 65,000 | 10,000 | 300 | 444,000 | 472,000 |
| Arkansas | 177,235 | 152,537 | 24,698 | 193 | 3,040,000 | 1,524,000 |
| California | 1,459,570 | 1,262,841 | 196,729 | 8,968 | 7,445,095 | 8,625,430 |
| Colorado | 235,000 | 216,550 | 18,450 | 1,700 | 1,410,000 | 940,000 |
| Connecticut | 237,640 | 199,592 | 38,048 | 2,886 | 4,529,929 | 998,000 |
| Delaware | 40,025 | 32,625 | 7,400 | 273 | 543,786 | 174,775 |
| District of Columbia | 116,539 | 101,866 | 14,673 | 1,763 | 137,940 | 941,949 |
| Florida | 408,967 | 344,232 | 64,735 | 1,125 | 5,849,000 | 3,272,000 |
| Georgia | 237,308 | 207,292 | 30,016 | 677 | 3,101,444 | 1,786,000 |
| Idaho | 85,637 | 78,640 | 6,997 | 500 | 1,245,000 | 514,000 |
| Illinois | 1,218,036 | 1,062,584 | 155,452 | 4,626 | 12,903,619 | None |
| Indiana | 690,608 | 598,338 | 92,270 | 2,865 | 4,672,341 | 3,867,112 |
| Iowa | 644,906 | 599,221 | 45,685 | 1,654 | 9,629,802 | 2,287,539 |
| Kansas | 433,686 | 391,061 | 42,625 | 988 | 4,380,000 | 1,865,000 |
| Kentucky | 252,000 | 225,000 | 27,000 | 575 | 3,700,073 | 3,810,000 |
| Louisiana | 216,000 | 183,000 | 33,000 | 500 | 3,550,000 | 864,000 |
| Maine | 133,025 | 111,875 | 21,150 | 975 | 2,021,666 | 838,000 |
| Maryland | 224,081 | 213,632 | 10,449 | 2,195 | 2,147,330 | 631,379 |
| Massachusetts | 615,207 | 520,545 | 94,662 | 6,913 | 10,859,151 | None |
| Michigan | 992,178 | 862,916 | 129,262 | 2,835 | 14,260,504 | 4,371,341 |
| Minnesota | 572,149 | 509,956 | 62,193 | 2,326 | 9,313,269 | 2,460,000 |
| Mississippi | 185,000 | 166,500 | 18,500 | 50 | 1,500,000 | 1,570,000 |
| Missouri | 583,450 | 525,333 | 58,117 | 1,501 | 6,876,564 | 2,546,044 |
| Montana | 92,160 | 79,608 | 12,552 | 157 | 1,029,383 | 396,000 |
| Nebraska | 318,772 | 294,801 | 23,971 | 856 | 3,228,474 | 1,401,033 |
| Nevada | 20,527 | 16,480 | 4,047 | 70 | 200,000 | 175,000 |
| New Hampshire | 79,400 | 70,000 | 9,400 | 1,100 | 933,157 | 264,000 |
| New Jersey | 575,028 | 466,883 | 108,145 | 5,819 | 10,437,134 | None |
| New Mexico | 46,571 | 44,894 | 1,677 | 155 | 368,777 | 537,356 |
| New York | 1,505,597 | 1,246,010 | 259,587 | 12,366 | 23,986,671 | None |
| North Carolina | 391,673 | 355,794 | 35,879 | 800 | 5,601,000 | 3,133,000 |
| North Dakota | 144,324 | 133,164 | 11,160 | 350 | 1,118,337 | 303,000 |
| Ohio | 1,315,000 | 1,170,000 | 145,000 | 6,000 | 8,516,811 | 6,123,918 |
| Oklahoma | 430,000 | 400,000 | 30,000 | 800 | 4,429,000 | 2,580,000 |
| Oregon | 195,641 | 181,211 | 14,430 | 1,788 | 5,469,761 | 11,601,302 |
| Pennsylvania | 1,324,762 | 1,142,314 | 182,448 | 11,774 | 21,182,413 | 3,468,292 |
| Rhode Island | 93,473 | 76,602 | 16,871 | 1,082 | 1,659,738 | 257,897 |
| South Carolina | 152,350 | 137,793 | 14,557 | 198 | 1,744,660 | 2,095,642 |
| South Dakota | 160,000 | 149,000 | 11,000 | 325 | 2,400,000 | 960,000 |
| Tennessee | 223,797 | 203,492 | 20,305 | 415 | 2,753,000 | 1,443,000 |
| Texas | 903,733 | 820,476 | 83,257 | 1,980 | 9,475,431 | 5,135,628 |
| Utah | 78,191 | 67,238 | 10,953 | 482 | 576,919 | 568,725 |
| Vermont | 63,867 | 58,136 | 5,731 | 464 | 1,514,471 | 189,000 |
| Virginia | 275,100 | 239,500 | 35,600 | 1,400 | 4,136,241 | 2,338,000 |
| Washington | 324,660 | 278,936 | 45,724 | 2,106 | 5,232,016 | 1,501,797 |
| West Virginia | 183,667 | 162,530 | 21,137 | 66 | 3,246,449 | 1,350,000 |
| Wisconsin | 590,797 | 520,134 | 70,663 | 2,433 | 8,238,945 | 2,205,227 |
| Wyoming | 44,246 | 39,487 | 4,759 | 149 | 441,035 | 221,194 |
| Totals | 19,579,768 | 17,172,567 | 2,407,201 | 99,973 | $243,612,336 | $93,502,577 |

was only about 18,000,000 vehicles in actual operation at the close of last year.

So, when 1926 registrations are commenced, if every car in operation is registered on January 1 there still will be a great many less than were shown in the 1925 registrations of the day before. Thus, the fact that present registrations are less than those recorded at the end of 1925 merely indicates that the number of new cars registered so far this year have not been sufficient to overcome the deficit brought about by the large number scrapped during last year.

The bulk of the cars being scrapped now were built during a period when production was increasing much more rapidly than it is at present and total production was about half of the total production at the present time. This fact seems to offer a reasonable explanation, then, why mid-year production should approximate that of the preceding end-of-the-year period and may be slightly less.

New York is again in the lead in the number of vehicles registered, with California, Pennsylvania, Ohio and Illinois following in the order named and in all of which there are more than a million vehicles. Ohio and Pennsylvania have changed places since a year ago, the former moving from third to fourth place.

Michigan is very close to the million mark and it appears that by the end of the year she will join the ranks of the automobile "millionaires."

During the past year the District of Columbia has climbed out of the group of States with less than 100,000 registered vehicles, leaving only eleven States in this group.

As was the case a year ago, there are 14 States with more than 500,000 vehicles and in the first nine States are 51 per cent of the total, which compares with 52 per cent, the similar figure a year ago.

In five States increases of more than 100,000 vehicles over last year's figures have been made as compared with six States in this category a year ago. Texas, Illinois and Oklahoma have been replaced in this group this year by Michigan and Florida.

Fifteen States show increases of less than 10,000 vehicles as compared with 11 States last year. Every State gained

over the figures of a year ago, whereas last year Delaware showed a slight loss.

The total gain of 1,991,152 compares with the similar figures of 2,108,407 for 1925 and 2,475,770 for 1924. This continued decrease while total production continues to gain is another indication of the influence which the number of cars being scrapped now has upon registration totals.

This time an attempt was made to obtain the number of buses registered but with meager results. Only 10 States so handle their registration data that they can tell how many buses are in operation. Many States include bus registrations with those of passenger cars, others include them with trucks, and others class taxis in with buses so that there is no way of determining how many vehicles of a capacity of eight or more persons are registered.

In the ten States in which this information is available there are 3346 buses in operation. Inasmuch as practically all States have rules and regulations covering bus operation, and license fees for buses are often based upon different factors than are used for other types of vehicles, it appears that it would be only a matter of administration to segregate bus registrations from others. It is a general practice to demand enough information before a license is granted to enable the authorities to determine what type

## Cars and Trucks in the United States—July 1, 1926

| | |
|---|---|
| New York | 1,505,597 |
| California | 1,459,570 |
| Pennsylvania | 1,324,762 |
| Ohio | 1,315,000 |
| Illinois | 1,218,036 |
| Michigan | 992,178 |
| Texas | 903,733 |
| Indiana | 690,608 |
| Iowa | 644,906 |
| Massachusetts | 615,207 |
| Wisconsin | 590,797 |
| Missouri | 583,450 |
| New Jersey | 575,028 |
| Minnesota | 572,149 |
| Kansas | 433,686 |
| Oklahoma | 430,000 |
| Florida | 408,967 |
| North Carolina | 391,673 |
| Washington | 324,660 |
| Nebraska | 318,772 |
| Virginia | 275,100 |
| Kentucky | 252,000 |
| Connecticut | 237,640 |
| Georgia | 237,308 |
| Colorado | 235,000 |
| Maryland | 224,081 |
| Tennessee | 223,797 |
| Louisiana | 216,000 |
| Alabama | 213,185 |
| Oregon | 195,641 |
| Mississippi | 185,000 |
| West Virginia | 183,667 |
| Arkansas | 177,235 |
| South Dakota | 160,000 |
| South Carolina | 152,350 |
| North Dakota | 144,324 |
| Maine | 133,025 |
| District of Columbia | 116,539 |
| Rhode Island | 93,473 |
| Montana | 92,160 |
| Idaho | 85,637 |
| New Hampshire | 79,400 |
| Utah | 78,191 |
| Arizona | 75,000 |
| Vermont | 63,867 |
| New Mexico | 46,571 |
| Wyoming | 44,246 |
| Delaware | 40,025 |
| Nevada | 20,527 |
| Total | 19,579,768 |

## Persons Per Motor Vehicle—July 1, 1926

| | |
|---|---|
| California | 3.0 |
| Florida | 3.2 |
| Iowa | 3.8 |
| Nevada | 3.8 |
| Kansas | 4.2 |
| Nebraska | 4.3 |
| South Dakota | 4.3 |
| Michigan | 4.4 |
| North Dakota | 4.4 |
| District of Columbia | 4.5 |
| Colorado | 4.5 |
| Indiana | 4.5 |
| Oregon | 4.5 |
| Minnesota | 4.6 |
| Washington | 4.7 |
| Wisconsin | 4.9 |
| Ohio | 5.0 |
| Wyoming | 5.3 |
| Oklahoma | 5.5 |
| Vermont | 5.5 |
| New Hampshire | 5.7 |
| Arizona | 5.9 |
| Illinois | 5.9 |
| Maine | 5.9 |
| Texas | 5.9 |
| Delaware | 6.0 |
| Missouri | 6.0 |
| Idaho | 6.1 |
| New Jersey | 6.4 |
| Utah | 6.6 |
| Connecticut | 6.8 |
| Massachusetts | 6.8 |
| Maryland | 7.1 |
| North Carolina | 7.3 |
| Pennsylvania | 7.3 |
| Rhode Island | 7.4 |
| Montana | 7.5 |
| New York | 7.5 |
| New Mexico | 8.3 |
| Louisiana | 8.9 |
| Virginia | 9.1 |
| West Virginia | 9.1 |
| Mississippi | 9.7 |
| Kentucky | 10.0 |
| Arkansas | 10.7 |
| Tennessee | 11.0 |
| Alabama | 11.8 |
| South Carolina | 12.0 |
| Georgia | 13.2 |
| Average—U. S. | 5.98 |

of vehicle is being considered. This being true, little difficulty would be presented in so recording the transactions that the actual number of buses could be determined.

An accurate count of this very important addition to the country's motor vehicle population has never been made and it will be impossible until the various States so change their administrative procedure that official information will be available.

In general, percentage gains in registration are decreasing, which is to be expected since, as total registrations increase, numerical gains must increase also in order to retain as great percentage gains as have been made in the past. A year ago there were 15 States with gains of over 20 per cent while this year the number has decreased to seven. In this group the South, which has made such tremendous strides during the past few years, is represented by Mississippi and Louisana in addition to the leader, Florida, and the District of Columbia.

Last year only 11 States gained less than 10 per cent while this year 24, or half of the total, were under this

## Numerical Gains in Car and Truck Registrations—July 1, 1925, to July 1, 1926

| | |
|---|---|
| Michigan | 192,990 |
| California | 176,367 |
| New York | 173,429 |
| Florida | 151,967 |
| Pennsylvania | 110,853 |
| Illinois | 94,471 |
| Ohio | 82,057 |
| New Jersey | 69,176 |
| Massachusetts | 63,944 |
| North Carolina | 59,528 |
| Wisconsin | 56,135 |
| Minnesota | 52,981 |
| Indiana | 50,219 |
| Texas | 50,074 |
| Missouri | 47,922 |
| Louisiana | 42,067 |
| Nebraska | 38,772 |
| Mississippi | 36,355 |
| Iowa | 34,001 |
| District of Columbia | 32,047 |
| Georgia | 29,746 |
| Washington | 29,481 |
| Arkansas | 27,165 |
| Colorado | 27,156 |
| Kansas | 26,696 |
| Kentucky | 24,824 |
| Connecticut | 20,474 |
| Alabama | 20,021 |
| North Dakota | 18,230 |
| Idaho | 17,045 |
| Oregon | 16,253 |
| Arizona | 15,059 |
| Virginia | 13,700 |
| Maryland | 11,577 |
| South Carolina | 9,271 |
| South Dakota | 8,674 |
| Montana | 8,210 |
| Utah | 6,998 |
| New Hampshire | 6,280 |
| Delaware | 6,025 |
| New Mexico | 6,021 |
| Tennessee | 5,389 |
| Oklahoma | 5,000 |
| Rhode Island | 3,700 |
| Vermont | 3,443 |
| West Virginia | 2,817 |
| Nevada | 2,768 |
| Maine | 2,025 |
| Wyoming | 1,746 |
| Total | 1,991,152 |

## Percentage Gains in Car and Truck Registrations—July 1, 1925, to July 1, 1926

| | |
|---|---|
| Florida | 59.1 |
| District of Columbia | 38.0 |
| Arizona | 25.1 |
| Idaho | 24.8 |
| Mississippi | 24.4 |
| Louisiana | 24.3 |
| Michigan | 24.2 |
| Arkansas | 18.1 |
| North Carolina | 17.9 |
| Delaware | 17.7 |
| Nevada | 15.6 |
| New Mexico | 14.9 |
| North Dakota | 14.5 |
| Georgia | 14.3 |
| Nebraska | 13.8 |
| California | 13.7 |
| New Jersey | 13.6 |
| Colorado | 13.1 |
| New York | 13.0 |
| Massachusetts | 11.6 |
| Kentucky | 10.9 |
| Wisconsin | 10.5 |
| Minnesota | 10.4 |
| Alabama | 10.3 |
| Washington | 10.0 |
| Montana | 9.8 |
| Utah | 9.8 |
| Connecticut | 9.4 |
| Oregon | 9.2 |
| Pennsylvania | 9.1 |
| Missouri | 9.0 |
| New Hampshire | 8.6 |
| Illinois | 8.4 |
| Indiana | 7.8 |
| Ohio | 6.7 |
| Kansas | 6.6 |
| South Carolina | 6.5 |
| Texas | 5.9 |
| South Dakota | 5.7 |
| Vermont | 5.7 |
| Virginia | 5.7 |
| Iowa | 5.6 |
| Maryland | 5.2 |
| Rhode Island | 4.1 |
| Wyoming | 4.1 |
| Tennessee | 2.5 |
| West Virginia | 1.6 |
| Maine | 1.5 |
| Oklahoma | 1.2 |
| Per cent gain, Total | 11.3 |

## Registration of Buses in States Where This Information is Available—July 1, 1926

| | |
|---|---|
| District of Columbia | 135 |
| Georgia | 100 |
| Indiana | 822 |
| Maryland | 375 |
| Minnesota | 359 |
| Rhode Island | 312 |
| South Carolina | 121 |
| Virginia | 81 |
| Washington | 555 |
| Wisconsin | 486 |
| Total | 3,346 |

figure and five others gained less than the average.

In spite of the decreasing gains made, the automotive population continues to increase faster than the driver population. The factor now—5.98—while greater than that of 5.7 registered at the close of 1925, is considerably less than the 6.47 persons per vehicle registered a year ago.

California still leads but is being closely pressed by Florida which is only 0.2 of a person per vehicle behind. There are 12 States in which there is a motor vehicle for every family, or every 4.5 persons. Just half the States and the District of Columbia have less than the average of 5.98 persons per vehicle. A year ago there were only five States with less than 4.5 persons per vehicle.

The many difficulties which lie in wait for one attempting to obtain accurate registration data are still present. They have been reviewed several times in these pages so that they should be fairly well known by this time. In obtaining data at this time more trouble is met with than at the close of the year because few of the States attempt to keep their figures up to date during the year.

Because of this fact it is possible to obtain complete and accurate registration data at this time from relatively few States, the figures given out by other States usually include estimates of from one week to a month's business. Practically all estimates which have been included in the data presented here have been made by the State motor vehicle officials and so can be assumed to be reasonably accurate. If they err it is probably on the side of optimism since most State officials appear to desire as large registration totals as possible.

In addition to this factor there are also the regular sources of duplication caused by inclusion of transfers, reregistrations and non-resident registrations in the total published figures. Wherever possible, and it has been possible in most cases, these duplications have been eliminated in the figures published here. As has been mentioned in previous articles, however, the administrative methods employed by a number of the States, particularly in regard to non-resident registrations, do not permit avoidance of duplication. Until these conditions are changed it will continue to be impossible for any agency to compile absolutely accurate data on motor vehicle registrations.

For practical purposes it is doubtful if these discrepancies make any appreciable difference in the data. Certainly for use in statistical work in connection with market analysis the figures published here which, without doubt, are within five per cent of unobtainable accuracy, will furnish quite satisfactory basis for investigation and research.

# German Firms of Daimler and Benz Complete Consolidation

THE firms of Daimler and Benz, the two oldest and among the most important in the German automobile industry, which some years ago combined their purchasing and sales departments in order to reduce operating expenses, are now to be completely consolidated. The new firm is to be known as Diamler-Benz A.-G. and is to have a capital stock of 32,000,000 marks. It is stated that about a year ago both firms reorganized their plants for quantity production according to the American plan. This necessitated large expenditures for new equipment, and the capital needed for this reorganization was furnished by the Deutsche Bank. This bank thereby gained control of, or at least a strong influence over, both companies and inspired the plan of a complete fusion.

Of the new stock to be issued the stockholders of Benz are to receive 9,000,000 marks and the stockholders of Daimler 11,760,000 marks. Previously the Daimler Motor Company had a capital stock of 36,000,000 marks of which 20,000,000 were outstanding and the rest were held in the treasury.

A complete amalgamation of the two concerns was planned at the time when the purchasing and sales departments were combined, but was rendered practically impossible at the time by the high capital tax on such transactions. Tax conditions in this respect have improved recently, and the difficulties in the way of complete fusion were thus eliminated.

Each of the two companies owns one passenger car and one commercial vehicle plant, and in addition the Daimler works have their own body plant. Hereafter the production programs of the various plants will be non-interfering. The Daimler plant in Unterturkheim will produce supercharged passenger cars of 15/70/100 and 24/100/140 hp. rating, the Benz factory in Mannheim, passenger cars of 10/30 and 16/50 hp. rating. The Daimler commercial vehicle, Marienfelde near Berlin, will produce only large trucks of 4 and 5 tons capacity, the Benz commercial vehicle factory in Gaggenau, light trucks of ¾, 1, 1½, 2 and 3½ tons capacity.

The general offices of the new firm are to be established in Berlin. The Daimler Motor Company, which was Germany's chief producer of aircraft engines up to the time of the Armistice, will again enter this field more actively, and to this end has purchased an interest in the Bayerische Motoren-Werke in Munich, which during the latter stages of the war developed an aircraft engine of very advanced design.

A considerable impetus to air transport and the aircraft industry is expected in Germany from an agreement recently reached between the French and German governments after a prolonged meeting in Paris, whereby most of the disabilities under which Germany has labored in aircraft production since the Armistice have been removed. One of the outcomes of this agreement is the establishment of the Paris-Berlin air service to which reference has been made already in these columns.

# Oldsmobile Engine is Made Larger; New Body Model Added

***Cylinder bore increased 1/8 in., adding 16 cu. in. to piston displacement. Crankcase ventilating system, oil and air cleaners, harmonic balancer adopted.***

**By Leslie S. Gillette**

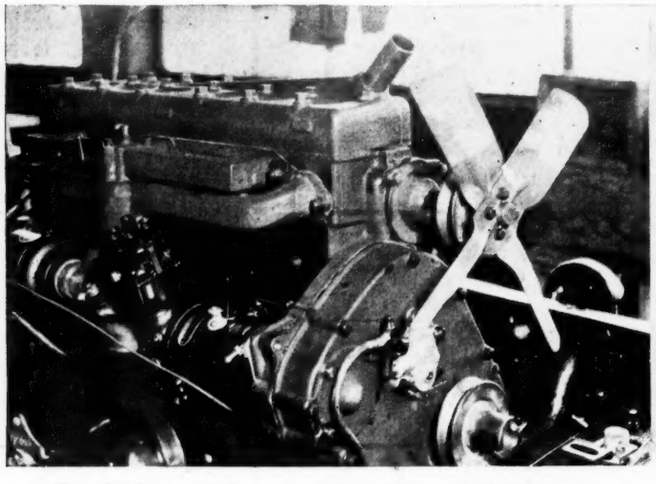
A LARGER, smoother and more economical engine, embodying such new features as a crankcase ventilating system, oil and air cleaners, and a "two-way" cooling system, together with chassis and body changes making for improved appearance and better driving comfort, are incorporated in the new "E" series of Oldsmobile cars. Except for the addition of one new body style, a five-passenger Landau listing at $1190, the previous line of five body models and also the prices of the standard equipped cars of the former series are retained.

The general appearance of the new cars has been improved materially by the adoption of full-crowned fenders, new dust-shields, and by the raising and widening of the radiator, which gives the hood line a longer, flatter appearance. Chromium plating, introduced recently by the Olds Motor Works, is used on all parts ordinarily nickeled. New appointments and upholstery are employed on the slightly changed Fisher closed bodies while the lowering of the seat cushions has increased the headroom. The new two-filament headlight bulbs are used and a lever for controlling the lighting system is mounted in the hub of the steering wheel and matches with the throttle lever. A new type of thief-proof ignition lock is mounted on the redesigned instrument panel.

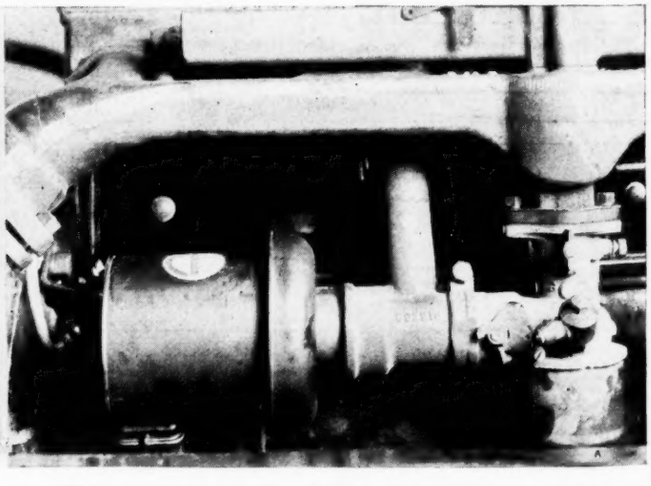
Increasing the power through enlarging the bore 1/8 in. to 2 7/8 in., has permitted a lowering of engine speed in relation to car speed, giving smoother operation at all speeds and also allowing a higher low speed torque. The new piston displacement, larger by 16 cu. in., together with other changes, has resulted in a power increase of 16 per cent which has improved the road performance of the car approximately 10 per cent. Maximum power is developed now at 2400 r.p.m. as compared with the 2600-2700 r.p.m. range of the previous models.

In conjunction with the reduced engine speed, the rear axle ration of all models has been lowered from 5.1 to 4.73 to 1, a decrease of 8 per cent. This marks the only change which has been made on the axles. Greater agitation is given to the mixture through changes in the cylinder head design in which the "dome" portion is made higher and the flat portion over the piston set lower, thus shifting the mass of the mixture under compression more directly over the valves. In line with this change the spark plug location has been moved nearer the valves and mounted in a vertical position, which enables plain, short reach plugs to be employed. The casting itself is deeper by 1/2 in. to provide additional water space over the valves and combustion chamber.

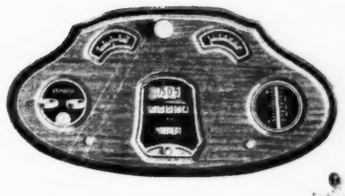
While the first official announcement is made at this



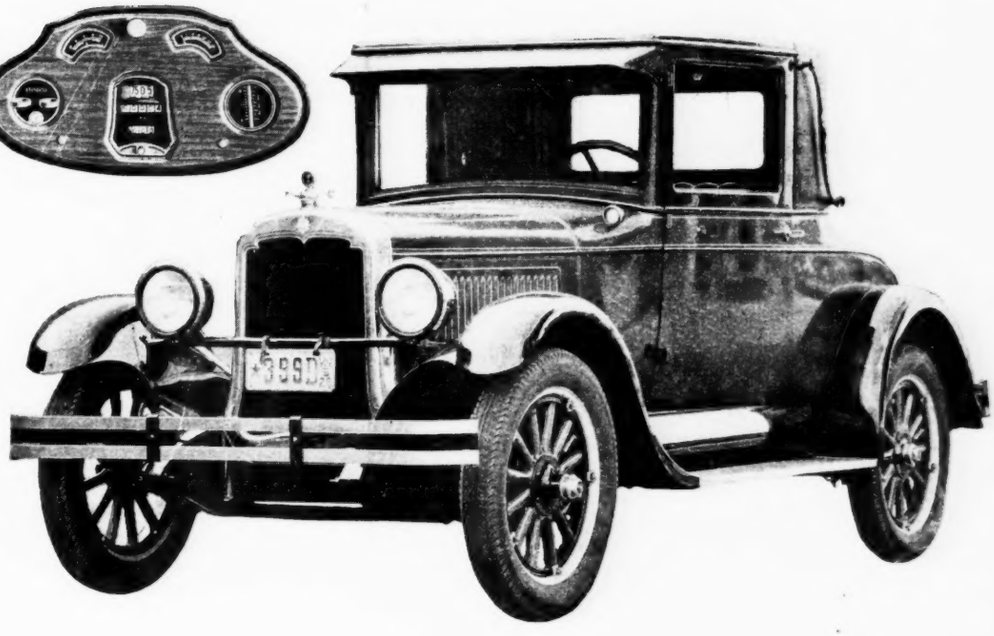
*To obtain smoother operation, the manifolding on the new Oldsmobile has been materially changed. The intake manifold is provided with abrupt turns for added turbulence and the ports are now located above the exhaust ports*



*This view shows the intake pipe from the valve chamber connected with an elbow joint which has an A-C air cleaner at one end and a carburetor at the other. Both the crankcase ventilating system and the air cleaner are standard on the new Oldsmobile*



*The redesigned instrument panel on the new Oldsmobile. On the extreme right is shown the new K-S gasoline gage which has been adopted as standard equipment on all models*



*With the adoption of full crowned fenders and a higher radiator, which gives smoother lines to the hood, the general appearance of the new 1927 Oldsmobile cars has been materially improved*

time incident to the adoption of the "harmonic balancer," this device has been employed on Oldsmobile cars for several months past and it marks the second car in the General Motors group to be so equipped. The balancer is of the same type, and mounted on the crank web between No. 1 and 2 connecting rods in the same manner as the unit employed on the 1926 series Oakland cars. Coincident with this change, the method of drilling the crankshaft has been altered from parallel holes through the crank pins to diagonal ducts drilled through the crank webs while the center bearing cap is now of the four-bolt type, replacing the previous two-bolt cap.

Two centrifugal type air cleaners of A-C make, one mounted on the breather opening in connection with the crankcase ventilating system and the other attached directly on the carburetor air intake, are employed on the new model. The coupling between the standard air cleaner and the carburetor is provided with an elbow leading directly into the rear valve cover plate. On the opposite side of the engine a smaller type of air cleaner formed integral with the bayonet type oil gage is mounted on the crankcase in the manner of a breather. When ascertaining the oil level the air cleaner is removed, bringing with it the integrally formed oil blade.

### Air Circulation in Crankcase

Due to the regulation placed on the main air intake sleeve and the connection leading to the valve chamber, the carburetor takes one-third of the required amount of air through the crankcase and the other two-thirds through the main air cleaner. After entering the crankcase through the smaller air cleaner, the air circulates through the chain and valve compartments before it is drawn into the carburetor and it is claimed this action rids the lubrication system of the water vapors and parts of the heavier "ends" of the fuel. In addition the air circulation tends to cool the inside of the engine and prolong the useful life of the oil. The water vapor is said to assist in carburetion and any portion of the lubricating oil drawn off from the crankcase mist tends to aid lubrication of the valve mechanism and cylinder walls. By limiting the amount of air entering the case, a portion of the less volatile "end" of the fuel remain in the crankcase which prevents the oil from becoming too heavy in cold weather and making starting difficult.

Oldsmobile is the first make of car to be equipped with a new type of oil filter, also of A-C make. The device consists of a small cylindrical shell approximately 2½ in. in diameter by 7¾ in. long enclosing a bag of special flannel provided with a header through which the oil enters. The header distributes oil to various channels formed in the flannel by stitching. The bag, rolled up, is placed in the screen retainer contained in the shell and as soon as it becomes clogged due to the dirt taken from the oil, the pressure causes the bag to unroll, exposing a new section of the filtering element to the incoming oil. The complete unit is placed on the left side of the dash and is fed from a joint taken off the gage line with the outlet feeding back directly into the rear end of the crankcase.

In revising the engine design, particular attention has been paid to the manifolding, valve mechanism, and the cooling system. While the inlet ports remain of the three-port variety, their shape, location and size have been improved. Instead of being in line with the exhaust ports, the intake manifold is connected with the block above the exhaust outlets, insuring better heating of the incoming mixture and allowing the use of a more suitable "hot-spot." The vertical section connecting the carburetor with the new abrupt cornered, square shaped intake manifold is jacketed by the exhaust manifold, the latter now making connection with the block through individual ports instead of the four outlets previously employed.

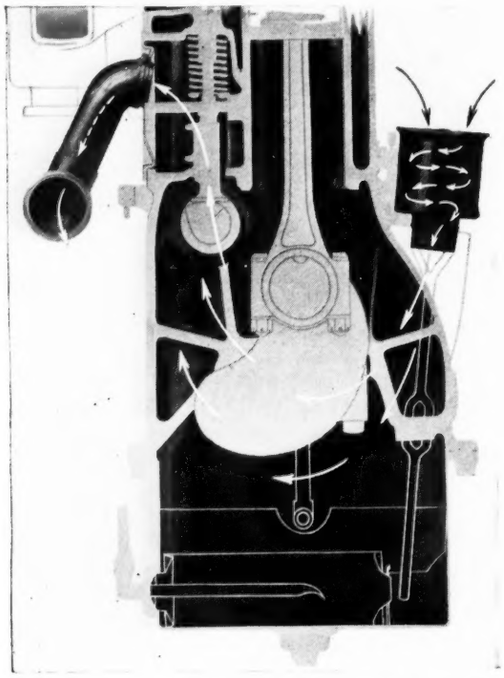
Due to the reduced size of the intake openings enabling higher mixture velocity, and also to the redesigned intake manifold together with the new abrupt T shaped intake ports affording maximum uniformity in the mixture proportions, the starting, acceleration and fuel economy is said to be improved greatly. With the Carter carburetor recalibrated to take care of the larger bore, the fuel mileage is said to be increased to 19.5 miles per gallon.

### Cam Contours Changed

In line with making both cams identical, their contours have been so changed as to give a constant rate of valve lifter acceleration and also to make for quieter operation and reduced wear. Supplementing the cam-

shaft change, the valves are now provided with two separate springs of different size, the smaller diameter spring being surrounded by the larger spring, the latter being retained in the conventional manner. While this new arrangement makes for softer action and reduces dancing at high speed, the pressure of the valve head on the seat has been increased to 48 lb. to provide better cooling of the heads and more positive seating. Other changes in the valve mechanism include lengthening the valve lifter body and guide by 5/16 in., reducing the valve throat diameter to 1¼ in. and changes in the valve timing to give improved torque over low speed range.

A "two-way" cooling system embodying the desirable features of both pump and thermo-syphon principles is employed. The cooling water after entering the block from the pump has its major flow directed to the valves and spark plugs by means of a series of holes in the



*Diagrammatical view, showing the crankcase ventilating system employed on the new Oldsmobile engines. Air enters the crankcase on the left side of the motor through a combination breather fitted with an air cleaner and oil bayonet gage. Connection with the carburetor air intake enables the carburetor to draw one-third of its air supply in through the crankcase with the remaining two-thirds through an A-C air cleaner which is attached directly to the air intake. The engineers claim that water and fuel contained in the lubricating oil are drawn off by this new system*

cylinder head gasket and from there passes out to the radiator, while the minor portion circulates around the cylinder barrels and then out. In this system the cooling water does not circulate first around the cylinders and then pass on to the valves and combustion chamber, but the cooling water is brought directly in contact with the cylinder head with a separate supply of water used to cool the cylinders. Thus, the parts at the point of greatest heat are cooled by the manifold method of circulation while the water circulation around the cylinders is governed largely by the thermo-syphon type of action. When starting from cold, the flow round the cylinders is sluggish, permitting an efficient temperature to be attained quickly while the subsequent flow is regulated automatically to maintain proper temperature for best results.

Slight changes have also been made in the piston design to provide additional stiffness, the fan has been altered for quieter operation, and the windings have been increased in the starting motor to provide greater cranking torque. The generator also is provided with a thermostatic control which automatically changes the charging rate according to seasonal conditions.

Louvres are formed in the clutch housing cover plate to ventilate the case and provide proper cooling for the clutch. The transmission adopted on the "E" series is a new model of the same make and type as that employed on the previous cars and interchangeable with the old units. It is a Muncie "baby" unit which is smaller and lighter than the previous transmission and at the same time embodies several improvements tending toward quieter operation and longer life. The shape of the gear teeth have been improved and the ratios altered slightly. The plain bronze pilot bearing inside the main drive gear has been replaced with a Hyatt roller bearing to insure correct relationship between the sliding gears and countershaft. Speedometer gears are now located at a lower point in the case to provide for better lubrication.

The gear shift lever lock has been discarded and a new ignition lock substituted in its place. The lock, mounted on the instrument board, is formed integral with the coil and on account of different voltages employed in the outgoing and lead-in wires, it is impossible to wire around the switch. In starting the engine, the ignition lock must be released and the key removed before the switch can be turned, when the ignition is turned off the lock is fastened automatically. The wiring is carried in integral woven leads.

### Additional Frame Member

An additional frame member has been placed at the rear of the frame to accommodate a new type of cylindrical fuel tank and provide for extra stiffness. For chassis lubrication Alemite connections are now fitted. In raising the hood line, the height of the radiator has been increased by ⅝ in. and at the same time a 5/16 in. hexagon copper core is adopted. The fan belt is now of the round type, replacing the previous V belt. With the addition of a K-S dash gasoline gage as standard equipment on all models, the walnut finished instrument panel has been redesigned and provided with the indirect system of illumination.

All closed models are upholstered with a short nap velour of taupe shade except the new Landau, which is finished in a gray long nap mohair. Combination match and ash receptacles are set in the backs of the front seats of the sedans, and on the right side of the coach models. All hardware is of a new design in a satin nickel finish. Equipment and accessories are the same as supplied with the previous series. The new Landau is finished in a striking color combination of sea fog gray below the moulding with ocean blue above and the upper structure in black. The rear upper quarter, covered with black fabric, is provided with "D" shaped windows and landau bows. This car comes equipped with bumper, bumperettes, stop light, disk wheels and other items included in the equipment of the regular models. Shock absorbers all round are standard on all de-luxe editions.

Both the coaches and sedans may be supplied optionally finished in Dagestan blue or in special two-tone gray.

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BY a royal decree dated February 25, and which went into effect on March 1, the import duty on motorcycles entering Sweden was changed from 60 crowns per machine to 15 per cent ad valorem.

# *Just Among Ourselves*

### Thinks Traffic Toll Has Reached Crest

HOPE that the wave of traffic fatalities, now standing at 24,000 a year, has reached its crest and is beginning to recede is held out by A. B. Barber, Manager of the Department of Transportation of the Chamber of Commerce of the United States and Director of the National Conference on Street and Highway Safety. "The reports for the first five months of this year," he said, addressing the Tennessee Traffic Conference, "while as yet incomplete, seem to indicate a small reduction in the total of accidents for the country taken as a whole. The estimates of this reduction range from 3 per cent to 15 per cent as compared with the corresponding months last year. This is very encouraging, for if the record is continued throughout 1926, it will be the first year since the motor vehicle began to be a problem that an actual decrease, as compared with the previous year, has occurred."

* * *

### Two-Stroke Supercharged Engines Next in Europe

TWO-STROKE horizontal supercharged engines are likely to be the next development in European racing circles, according to W. F. Bradley, our European Correspondent. Although no information of any kind has been given out by the firm, Mr. Bradley says, it is known that the Italian Fiat Company, after two years' experiments, has completed a two-stroke supercharged horizontal straight eight with two pistons per cylinder and two crankshafts. The car has been tried out by Bordino on Monza track, near Milan, with excellent results, and is expected to run in the Italian Grand Prix next September. In France Engineer Cauzan has designed and built a set of four-cylinder 91½ in. horizontal supercharged two-stroke engines with two pistons per cylinder and two crankshafts. The first of these engines has been fitted in a racing motor boat and will compete in the Duke of York trophy in England at the end of this month.

* * *

### Developments New and Old Discussed

THE Sima-Violet Company, of Paris, also has a four-cylinder horizontal opposed two-stroke 91½ in. engine building for the French Grand Prix and other races. A single crankshaft is used and cylinders 1 and 2 and 3 and 4 are opposed. Crankshaft compression is used and the mixture is admitted through a rotary distributor. The use of two pistons per cylinder, with the explosions taking place between them, is not new, for a vertical four-stroke engine of this type, having a main shaft in the basechamber and an auxiliary overhead shaft for the upper pistons and rods, was built by Gobron in France about 1906. This engine was in regular production and during the early aviation period a few were built according to this design for Voisin fiying machines.

* * *

### Smoke Doesn't Make a City

THE idea that "bigger" isn't synonymous with "better" gradually is taking hold in some of our industrial towns. "The more smokestacks, the better the town" no longer constitutes the civic slogan of every hamlet in the country. Too many cases have cropped up in which energetic Chambers of Commerce brought to a town more industries than the town could properly care for, with adverse results both to the incoming industry and the old inhabitants of the town. It is pleasing to note that a recent meeting of industrial managers of chambers of commerce held under the auspices of the Chamber of Commerce of the United States condemned "indiscriminate efforts on the part of American cities to grow a forest of smoke-stacks by locating new industries within their limits." These specialists," says a bulletin just issued by the U. S. Chamber, "declared themselves committed in a practical way to the principle of seeking to locate in their cities only those industries for which there is a prospect of economical and profitable operation." And so industrial progress continues slowly forward.

* * *

### Ask 'Em to Buy Automobiles, Too

DON'T know whether or not an "Ask 'Em to Buy" campaign ever was staged among insurance agents, but certainly they do. Recent experiences convince us that if automobile salesmen were as alert for prospects and as rapid in following up leads as the insurance salesmen there would be less seasonal decline in sales. The day after a man registers a new automobile in any city, he is lucky if no more than ten insurance agents solicit his business within 48 hours. Within 48 hours after he gets the car, in other words, a number of insurance salesmen have learned that he is a prospect for what they have to sell and have asked him to buy. That same man might have been a prospect for an automobile for several years in some places without ever being asked to buy. True, the insurance salesman in this case has an easier time locating prospects, but that fact alone doesn't account for all the differences which sometimes appear in the two types of selling.

—N. G. S.

# 1926 *Air Meet* Activities to Center Around *Civilian Planes*

**Main emphasis will be placed on development of commercial flying at Philadelphia in September. "On to Sesqui Race" a feature. From 500 to 1000 planes expected for contests.**

*By Athel F. Denham*

COMING at the high point of the Sesqui-Centennial Exposition, the National Air Races and other aeronautical activities, scheduled for Philadelphia the week of September 4-11, promise to develop into the finest and most complete air meet ever held. It has been variously estimated that from 500 to 1000 planes will participate in the activities of this week, and will do their share to demonstrate to the public the tremendous advances which have been accomplished during the past year both in the art of flying and the development of new products.

Civilian activities will be the keynote of the meet, and while the week's events will center around the annual National Air Races, these will form only a small part of the demonstration as a whole. Even in the National Air Races the chief stress will be laid on those events which are confined to civilian or commercial flyers and planes. Of the nineteen National Air Race events scheduled for this year, fourteen will be for civilian planes, four for military and one for National Guard ships and flyers. Military planes or flyers will not be permitted to compete in the commercial events. A further indication of the stress being laid on commercial developments is that about 90 per cent of the prize money will go to civilian flyers.

### No Idle Moments

According to the management of the air meet, there will not be a single idle moment from beginning to end. A continuous flying circus and exhibitions of new developments will be held. This includes also a night circus and demonstrations of commercial night flying. Provisions have been made so that new parts can be exhibited to the public in actual service. Rumors which seem to be well founded have been circulating in the aircraft industry for some time that several aircraft manufacturers have been working on some rather startling developments. It is impossible to make any definite statement at this time, but it is well within the bounds of possibility that some rather surprising advances, especially in the way of the construction of large passenger and transport planes, will be exhibited at the meet. It is also quite possible that the design of several new types of aircraft engines will be far enough advanced by September to enable the designers to exhibit them during National Air Race week.

A survey is also being made of the possibility of holding a still exhibit in the Transportation Building of the Sesqui-Centennial grounds. This exhibit will probably be held for three or four weeks and no charge will be made for space. This will do away with the objection of aircraft and accessory manufacturers to the tying up of material and personnel for the full time of the exposition.

There has been a great deal of criticism in the past of the policy of holding air meets on army fields. Government rules prohibited the presence of spectators on the field proper, and the public has been unable to view the commercial and civilian planes near at hand. This has been overcome by the management of the aeronautical division of the Sesqui-Centennial Exposition Association this year by the use of three fields, one each for the Army and the Navy and one for the civilian planes. The commercial planes will be on exhibition on the field designated for them at all times except during the holding of races. The commercial field is located near the junction of the Schuylkill and Delaware Rivers, approximately southwest of the exposition grounds and across the Schuylkill from the Navy Yard. This field, comprising about 350 acres, has been constructed on grounds originally condemned by the city of Philadelphia for other purposes and is adjacent to the National Guard field, on which the commercial planes will be stored while races are in progress. A railroad spur running to the commercial field will be used to facilitate shipments of aircraft and parts directly to the field. For the convenience of civilian flyers and mechanics wishing to remain in the vicinity of the field, a tent city will be erected by the administration adjacent to the commercial field.

The policy adopted of enabling manufacturers and inventors to demonstrate their products to the public is highly commendable. While the National Air Races have been designed so as to bring out the progress in various types of aircraft, there are so many individual factors in the make-up of aircraft progress that a complete picture cannot be had except by exhibition of the individual parts.

The experience gained in previous years, showing which characteristics of the National Air Races have been most beneficial to the further development of aircraft, both civilian and military, has been taken advantage of in the making up of the program for this year's events. In addition the schedule has been arranged so as to attract nearly every type of aircraft now in use for any specific purpose, from the light airplane using a motorcycle type engine to the larger army bomber.

In the small airplane class, a division based on engine displacement has been made. There has always been some confusion on what should be classified as a light plane. The races this year have been so arranged as to group all ships with an engine displacement of 80 cu. in. or less in a "Light Airplane" class and the ships with

up to 300 cu. in of piston displacement in a "Sport Plane" group. For the Light Airplane group two races have been arranged, one being a strictly speed race, the other involving efficiency as well as speed. Sport planes can be entered in a speed race limited to these planes. In the efficiency race for light airplanes, as well as in all other races in which efficiency is an element in the awarding of prizes, the scoring will be made on a basis of speed, contest load and horsepower.

The method of classifying commercial planes according to engine displacement, or what practically amounts to horsepower, is carried out in the limitations governing the other races for specific classes. The "Light Commercial Speed and Efficiency Race" is limited to planes with 800 cu. in. or less displacement. The same limitation of 800 cu. in. set for the Light Commercial Speed and Efficiency Race has also been made in a free-for-all race for two, three or four-place airplanes. This limitation will include practically all commercial planes equipped with a Wright Whirlwind engine or engines of similar power. The difference in performance of planes in this race with those entered in the Aero Club of Pennsylvania events will be interesting to observe, as in many cases they will represent the difference in performance of the same general type of plane equipped with wartime and more modern engines of somewhat higher power and greater efficiency.

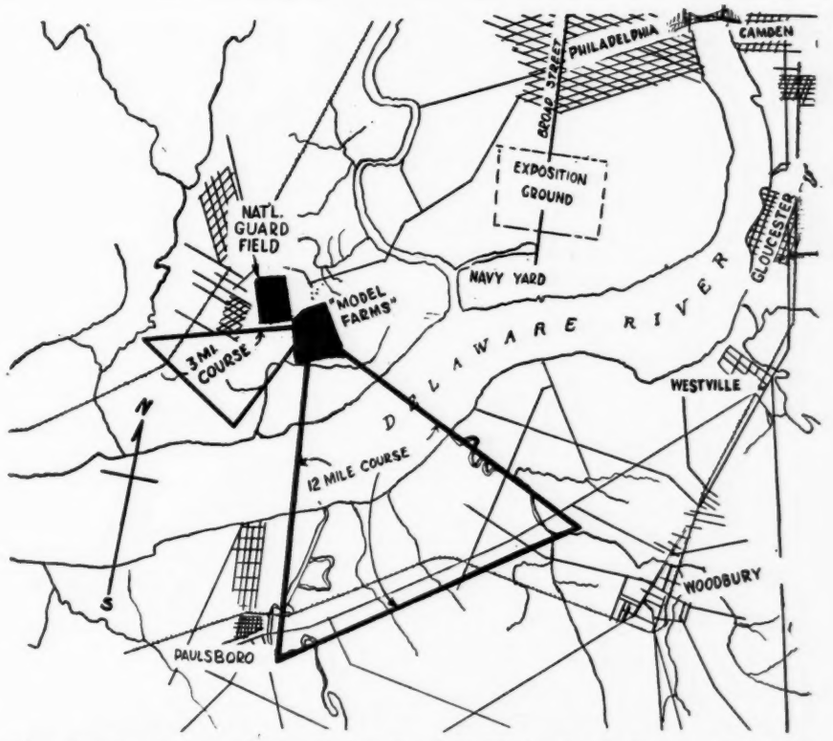
A general classification of "low-powered" airplanes also has been made. These will compete for the Aero Club of Pennsylvania Trophy in a series of two elimination races and a final race between those placing in the first two races. Prize money will be awarded in each race. The entry list of planes for this trophy is expected to be very large and has necessitated the adoption of a system of elimination. Engine displacement has been limited to 510 cu. in., and will thus include all planes powered with Curtiss OX type engines. This type of plane has become very popular of late and a considerable number of aircraft manufacturers are concentrating on it for general civilian use at the present time.

### Two Relay Races

To bring out some of the flight and landing characteristics of the small commercial planes in general use today, two relay races have been arranged for teams of three airplanes, each ship being limited to an engine displacement of 510 cu. in. The advantage in this race, consisting of a take-off, circuit of a 12-mile course and landing of each plane, will lie with the ship having a short take-off, good initial climb, good gliding angle, short run on landing and, to some extent, speed.

With the coming into being in quantity this year of privately operated air mail and transport lines, the Air Transport Speed and Efficiency Race, open to all planes carrying a pay load of 1000 lb. or more, will be of considerable interest. Air transport lines are gradually being regarded as forming the backbone of civil aviation. With their fate is associated to a considerable extent the fate in the near future of civilian flying in this country.

## *Where Air Races Will be Held*




*Map showing layout of courses for the 1926 National Air Races and location of the "Model Farms" and National Guard Fields where all commercial and civilian airplanes will be located during the meet. Separate fields have been assigned to Army and Navy airplanes*

While not strictly a part of the National Air Race week, the "On to the Sesqui Race," to be run on similar lines to the "On to Mitchell Field Race" last year, is of considerable importance. The race, which will precede the National Air Races, is designed to demonstrate the cross-country ability of commercial aircraft, no limitation being made as to size or type. In order to take care of the great variety of planes which will probably compete in this race, and the varying distances over which they will be flown, the awarding of prizes, totaling $4000, will be made on a point score based on average speed, distance covered, number of passengers carried and engine horsepower.

In order to encourage the building of model airplanes, a Duration Race for Model Airplanes will be held, no restrictions being made except that the wing span shall not exceed 40 in. This race is limited to the Junior Flying League of the National Aeronautical Association.

A Precision Landing Contest open to any type of commercial plane flown by a civilian will complete the National Air Race program as far as contests for commercial planes are concerned. This contest is intended to demonstrate the skill of the participating pilots in effecting a landing without the aid of the motor.

To demonstrate the advances made in the designs of military aircraft, four races have been provided. Two of these will be for pursuit type planes, one limited to pilots of the First Pursuit Group, the other being a "Free-for-all," including those of foreign countries. These two races will take the place of the Pulitzer Race held in former years and will have an advantage over that race in that the competing planes will be ships used in actual service rather than specially built racing jobs. Bombing and torpedo planes, etc., are eligible in a race for large capacity planes limited to military aircraft

## *National Air Meet—Program of Events*

**EVENT A.** "On to the Sesqui Race." Civilians only. Ending September 3. Prizes $4000. Open to any make or type of aircraft.

**SEPTEMBER 4**

**EVENT 1.** First Elimination for Aero Club of Pennsylvania Trophy. Free for All Race for Two or More Place Low Powered Airplanes. Civilians only. Prizes $1250. Piston displacement of 510 cu. ins. or less.

**EVENT 2.** Free for All Race for Two, Three, or Four Place Airplanes. Civilians only. Prizes $2500. Piston displacement of 800 cu. ins. or less.

**SEPTEMBER 6**

**EVENT 3.** Duration Race for Model Airplanes. Prizes $500. Wing span not to exceed 40 ins.

**EVENT 4.** Novelty Relay Race for Commercial Planes (First Race). Prizes $1000. Piston displacement not to exceed 510 cu. ins. Teams of three planes each.

**EVENT 5.** Speed race for National Guard Pilots and Planes. Prizes $1000. Limited to National Guard training planes.

**SEPTEMBER 7**

**EVENT 6.** Sport Plane Race. Civilians only. Prizes $1500. Piston displacement of 200 cu. in. or less.

**EVENT 7.** Race for Light Airplanes. Civilians only. Prizes $1500. Piston displacement of 80 cu. ins. or less.

**EVENT 8.** Novelty Relay Race for Commercial Airplanes. (Second Race). Civilians only. Prizes $1000. Identical with Event No. 4.

**SEPTEMBER 8**

**EVENT 9.** Second Elimination for Aero Club of Pennsylvania Trophy. Free for All Race for Two or More Place Low Powered Airplanes. Civilians only. Prizes $1250. Identical with Event No. 1.

**EVENT 10.** Speed and Efficiency Race for Light Airplanes. Civilians only. Prizes $2000. Total piston displacement of 80 cu. ins. or less.

**EVENT 11.** Light Commercial Speed and Efficiency Race. Civilians only. Prizes $2500. Speed $850. Efficiency $1650. Total piston displacement not to exceed 800 cu. ins.

**SEPTEMBER 9**

**EVENT 12.** Final Race for Aero Club of Pennsylvania Trophy. Free for All Race for Two or More Place Low Powered Airplanes. Civilians Only. Prizes $2000. Piston displacement of 510 cu. in. or less.

**EVENT 13.** Precision Landing. Civilians only. Prizes $500. Contest is open to any type of commercial plane.

**EVENT 14.** Race for Observation Type (two-place) Airplanes. Military only. Prizes—Individual Trophy Awards.

**SEPTEMBER 10**

**EVENT 15.** Race for Large Capacity Airplanes. Military only. Prizes—Individual Trophy Awards.

**EVENT 16.** Race for Pursuit Type Planes. Closed Event for Pilots of the First Pursuit Group. Prizes — Individual Trophy Awards.

**SEPTEMBER 11**

**EVENT 17.** Air Transport Speed and Efficiency Race. Civilians only. Prizes $2500. Minimum Pay Load 1000 lbs.

**EVENT 18.** Free for All Military Pursuit Ship Race. Prizes — Individual Trophy Awards. Military or Naval planes of the pursuit type, including those of foreign countries.

while observation type airplanes will compete in the Liberty Engine Builders' Trophy Race. A separate race for National Guard pilots and training planes of the JN4 type completes the program of that part of the air-meet under the supervision of the National Air Race Committee.

In the formation of plans for this air-meet, the management has been peculiarly fortunate in that the entire program is being sponsored by the city of Philadelphia rather than by private organizations.

Manufacturers and inventors alike will have an opportunity to demonstrate their products to the public in a manner which heretofore has never been approached in this country. In making the meet representatives of every branch of the aeronautical industry, it will be possible to show the magnitude of the industry and the strides which are being made along technical lines, both necessary in securing the confidence and assistance of the public, without which the establishment of aviation as a major industry will be seriously impeded.

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AT the fifteenth annual meeting of the German Scientific Society for Air Transport, recently held at Dusseldorf, Dr. Eng. Rumpler described a plan for a transoceanic airplane of very large dimensions. Having studied the subject of giant airplanes for long distance flights since 1918, he came to the conclusion that continued increase in size of planes of the present type would be impractical, as the bending stresses on the wings would soon become excessive. To eliminate these bending stresses, Dr. Rumpler proposes to decentralize or distribute the loads in such a manner that each small portion of the useful load is carried directly by the adjacent sustaining surface. The new construction thus created he refers to as an "airplane with unlimited width of span."

The principle of load distribution has been extended, moreover, to all of the other principal parts of the machine. For instance, no fewer than 10 engines of 1000 hp. each are provided for, attached to the rear part of the wing, and six floats, instead of the one or two used heretofore.

According to the calculations of the inventor, this giant plane would be capable of carrying 130 passengers with baggage and a crew of 25 in 36 hours from Hamburg to New York, with intermediate stops at Plymouth and the Azores. It was brought out in the discussion, however, that before this plan can be practically realized, a considerable number of problems will have to be solved by research in the aerodynamic and metallurgical fields.

Another paper that attracted a good deal of attention was one by Dr. Rohrbach on "Problems of Light Construction." It dealt chiefly with questions of materials of construction and with manufacturing processes. The question of wood vs. metal Dr. Rohrbach considers to have been answered definitely in favor of metal, and he thinks that duralumin has the advantage over steel, on account of the easier and more durable jointing processes, the more favorable tensile properties and the simpler forms and reduced periods of processing.

# U. S. Controls 70 Per Cent of Truck and Bus Export Business

## Canada is second and France third in number of commercial vehicles exported to other countries in 1925.

OF the total truck and bus exports during 1925 of 84,048 units from the five leading producing nations, including this country, Canada, France, United Kingdom and Germany, 58,624 or 70 per cent were exported from the United States, according to a recent report of the Department of Commerce. During 1924 our percentage of the total export business of these five countries was slightly over 58.

For the first time the Department is publishing comparative data showing export totals from this country in their relation to similar figures for other countries. Table 1 gives a summary of truck and bus exports for the five leading producing countries for 1924 and 1925 with the total value of the exports and their average unit value. An interesting feature of this tabulation is the wide difference between the average unit value of shipments from this country and Canada and those from European countries.

This factor undoubtedly has had a very considerable influence upon the great expansion of our export business during recent years and the increase in our relative proportion of the export business for 1925 over 1924 is due in no small measure to the decrease of $59 in the unit value of the shipments while the unit values of shipments from European countries either remained stationary or increased considerably.

The increasing demand for economical transportation of persons and goods is a strong factor in the growth of export markets of all producing countries and this is likely to continue for some time, particularly in such localities as Latin America, Australia, New Zealand and other places where the inhabitants are progressive.

### Shipments to Various Countries

In Table 2 is given the export shipments to various countries from the five leading producing nations and it is interesting to note that there are very few markets where the United States or Canada does not occupy the leading position.

Combined shipments of American design trucks and buses from this country and Canada to Australia during 1925 were nearly ten times as great as those from the United Kingdom, and our shipments to New Zealand were nearly nine times as great. The Irish Free State and France, which received most of their imported trucks and buses from Great Britain, and Algeria and Switzerland which patronized France, were the only countries providing truck and bus markets of any size which, during 1925, depended upon other countries than the United States and Canada to supply them with a majority of their imported commercial vehicles.

By adding to this list British India and Ceylon, New Zealand, British South Africa, British East Africa, Dutch East Indies, Straits Settlements and Egypt—to all of which Canadian exports during 1925 were greater than those from the United States—we have a total of only 11 countries throughout the world in which more foreign made trucks and buses (including Canadian) were bought during 1925 than those made in this country.

**TABLE I**

**Truck and Bus Exports from Principal Producing Countries**

| Countries of Origin | 1924 No. | 1924 Value | 1924 Average Unit Value | 1925 No. | 1925 Value | 1925 Average Unit Value |
|---|---|---|---|---|---|---|
| United States‡ | 27,352 | $19,199,344 | $702 | 58,624 | $37,703,302 | $643 |
| Canada‡ | 12,772 | 4,429,161 | 347 | 16,182 | 5,250,002 | 324 |
| France | 4,193 | 7,573,226 | 1,806 | 4,782 | 8,628,604 | 1,804 |
| United Kingdom* | 1,747* | 3,488,617 | 1,997 | 4,164 | 10,569,831 | 2,538 |
| Germany | 794 | 1,734,572 | 2,185 | 296 | 832,524 | 2,813 |
| | 46,858 | $36,424,920 | $777 | 84,048 | $62,984,263 | $749 |

* Separate truck chassis figures not available for 1924; there were 2905 passenger car, bus and truck chassis valued at $5,194,419 exported from the United Kingdom during that year.

‡ Does not include trucks exported as "parts" for assembly abroad; during 1924 and 1925 there were respectively, 142,346 and 150,350 American passenger cars, trucks and buses assembled in foreign countries; separate figures for trucks and buses are not available nor are United States and Canadian foreign assemblies segregated.

**TABLE II**

**Truck and Bus Exports from Countries of Origin**

| 1925 Countries of Destination | Countries of Origin: United States | Canada | France | United Kingdom | Germany |
|---|---|---|---|---|---|
| Australia | 7549 | 4875 | * | 1290 | * |
| Italy | 7419 | .... | .... | 4 | * |
| Brazil | 4695 | .... | * | 33 | 15 |
| United Kingdom | 4320 | 2008 | 335 | .... | 3 |
| Mexico | 3586 | 1 | * | 1 | * |
| Denmark | 3246 | .... | * | 5 | * |
| Belgium | 2269 | .... | 283 | 2 | * |
| Cuba | 2148 | .... | * | .... | * |
| Argentina | 1881 | 1 | * | 164 | 58 |
| Canada | 1837 | .... | * | 43 | * |
| British India and Ceylon | 1589 | 2208 | * | 705 | * |
| Chile | 1589 | 2 | * | 3 | 6 |
| Peru | 1458 | 42 | * | 9 | * |
| New Zealand | 1385 | 1749 | * | 355 | * |
| Spain | 1374 | .... | 473 | 24 | 16 |
| Uruguay | 1362 | 34 | * | 8 | * |
| British West Africa | 1144 | 355 | * | 78 | * |
| Philippine Islands | 1117 | .... | * | .... | * |
| China | 560 | 60 | * | 114 | * |
| Germany | 549 | .... | 368 | 62 | .... |
| British South Africa | 525 | 581 | * | 172 | * |
| Russia | 480 | .... | * | 159 | 70 |
| British East Africa | 432 | 760 | * | 85 | * |
| Sweden | 271 | .... | * | 5 | * |
| Netherlands | 168 | .... | * | 21 | 42 |
| Dutch East Indies | 145 | 1226 | * | 2 | * |
| Norway | 107 | .... | * | 20 | * |
| Straits Settlements | 88 | 1004 | * | 191 | * |
| Japan | 67 | .... | * | 10 | 2 |
| Egypt | 34 | 56 | * | 27 | * |
| Irish Free State | 29 | .... | * | 169 | * |
| Poland and Danzig | 21 | .... | * | 6 | 17 |
| Algeria | †7 | ‡13 | 470 | .... | * |
| Switzerland | 5 | .... | 922 | 1 | * |
| France | 3 | .... | .... | 32 | * |
| Other Countries | 5165 | 1207 | 1931 | 364 | 67 |
| Total No. | 58,624 | 16,182 | 4782 | 4164 | 296 |
| Total Value | $37,703,302 | $5,250,002 | $8,628,604 | $10,569,831 | $832,524 |

* Included with "Other Countries."

† Includes exports to Tunisia.

‡ Includes all of French Africa, except Morocco.

# Keeping Your Dealers' *Service Equipment* Up-to-Date—

## Problem can be simplified by utilizing sales organizations of jobbing houses

*By G. W. Brogan**

**ALL car manufacturers know that it is very much to their interest to have their dealers' service stations equipped with good tools. All other things being equal, good tools make for good workmanship, which in turn makes for satisfied car owners.**

**This paper, therefore, does not treat with a new subject, but it gives new emphasis to the importance of the dealer's service equipment and contains a number of practical suggestions which may prove of value to car manufacturers in strengthening their dealer relations, with special reference to service matters.**

**The author is an active advertising man who has specialized for some years in the service station tool and equipment field.**

AMONG the many problems with which the service manager of a car company has to struggle is the outstanding one of the getting his dealers' service stations equipped with the proper tools and equipment. This is actually the basis upon which the successful operation of car, truck and bus maintenance depends.

The service station which depends upon obsolete tools and hand methods can never hope to operate according to the flat rates which you have worked out for it. If the equipment is inadequate it will take too long to do a job, the jobs will not be uniformly good, and the prices will be too high, all of which will react against the reputation of the car which is being serviced. Therefore, the fundamental to make possible the adoption of flat rates, the efficient operation of the shop, and the earning of good will, is to get the service stations properly equipped.

In order to do this there are certain principles of selling which must be employed, a few of which might be listed as follows:

1. To make the dealer want an up-to-date shop.
2. To guide the dealer in the selection of the proper tools and equipment.
3. To get the dealer to order what he needs.
4. To have equipment delivered promptly before the dealer gets "cold feet."
5. To enable the dealer to pay for it conveniently.
6. To get the dealer to use it.
7. To show the dealer how to capitalize his equipment.

I will briefly discuss these points in the order mentioned.

It is of course necessary to emphasize the advantages to be derived from a properly equipped shop in the way of gross profits and good-will for both the dealer and the car which he is selling. All manufacturers send out bulletins to their dealers with this end in view and this is supplemented by the continuous advertising which is being done by the manufacturers of equipment and by the cooperative work of the manufacturers of equipment and the automotive jobbers through the agency of the Automotive Equipment Association.

Personal influence is probably the best method and road supervisors can put the ideas over verbally in a way which is impossible to accomplish by letter. So far as I know, there is no service manager at the present time who has enough road men to keep up the continuous pounding that is necessary in the majority of cases to get the point across. Therefore I call attention to an instrument which with very few exceptions has up to the present time been overlooked—the automotive jobbers and their vast army of salesmen. I wonder how many realize that there are in excess of 10,000 of these automotive jobbers' salesmen calling on dealers an average of once every two weeks! Practically all dealers are being called on by the salesmen of several automotive jobbers, with the result that some jobbers' salesman talks to every dealer twice a week.

To draw the picture very simply, imagine the amount of influence which would be exerted upon dealers if twice a week some automotive jobbers' salesman extolled the merits of a portable electric drill or the hydraulic jack or a set of chrome vanadium wrenches. It would be merely a matter of time before the constant repetition would influence the dealer to purchase these items.

And that is just exactly what is going on in the equipment field in general.

Why not utilize this tremendous force in working toward perfect car service?

In connection with making the dealer want an up-to-date shop, it would seem to me to be entirely within the

* From a paper read at the Service Convention of the National Automobile Chamber of Commerce, Detroit, June 15-16.

jurisdiction of the car builders to work together to produce, in digestible form, facts and figures which could be presented to dealers by jobbers' salesmen. I know that the jobbers' salesmen would welcome this sort of ammunition as supplementary to their selling efforts on equipment and I know that the manufacturers of equipment would use their influence, which is considerable, with the automotive jobbers to promote the effective use of such material.

I believe that the car manufacturers could do a lot of good by preparing a four-page folder containing propaganda to make the dealer want an up-to-date shop, this to be an official bulletin of the Service Managers' Section of the N.A.C.C., for jobbers' salesmen.

### Distribution of Manuals

The car manufacturers have been endeavoring individually to guide the dealer in the selection of the proper tools and equipment by means of bulletins, printed manuals of tools and equipment, and through their road men. I have had the good fortune of working with many of these manufacturers in the preparation of shop equipment manuals and the most recent one on which I worked is being distributed to jobbers' salesmen throughout the country, in order that they may go to the dealers of this particular company and show them this official manual and proceed to use their influence to induce them to install the equipment which has been recommended.

It seems to me that this army of jobbers' salesmen could easily be utilized by all car builders toward this end.

To get the dealer to order what he needs is a problem. In spite of all the bulletins and all the tool and equipment manuals which can be sent out, I maintain that the best way to get an order is for some one to take an order blank in and get it signed and take it away with him, and I think that the reports of road men will bear me out in this. The most successful road men that I know of have followed this procedure, but here again we have the opportunity of utilizing the services of the vast army of automotive jobbers' salesmen who have a dollars and cents interest in getting dealers' orders for equipment. These salesmen will work on dealers at every call, averaging a call every two weeks, until they get the order and they will take the order back to their house and have the goods shipped and if there is a cancellation of any items, they know about it immediately and will go right back and go to work on the dealer and resell him.

It is sometimes difficult to have equipment delivered promptly, before the dealer gets "cold feet." I know personally of case after case where dealers have been brought up to the point where they had actually ordered certain equipment but where the orders had been cancelled before delivery was made. As a matter of fact, a good many men find this the course of least resistance when pressure is brought to bear upon them. It is very easy to accede to the pressure which a representative may bring to bear and order certain equipment, and it is just as easy to cancel the order later on. My idea is that when a dealer has agreed to purchase certain equipment for his shop, it is best to see that that equipment is delivered to him within a day or two. I know of some road men who do not leave the dealer they are working on until the equipment has actually been received and installed. In this way they insure the results of their efforts in each particular case.

Every jobbers' salesman knows from experience that the sale is not consummated until the goods are delivered and paid for, consequently they make it a point to follow up their orders to get them shipped quickly, and here the automotive jobber has a distinct advantage over any other method of distribution, in that he carries a very complete stock of tools and equipment and is usually in a position to make immediate shipment, to say nothing of saving additional time by reason of the fact that he is usually much closer to the dealer in point of distance and shipping facilities than the manufacturer who is endeavoring to sell direct from the factory.

And because the automotive jobber carries equipment in stock, he is in a position to bring the prospect into his store and show him the actual equipment and tools which he proposes to sell him and explain their advantages, which gives jobber distribution a further advantage over the direct from factory selling methods, which must depend almost entirely upon photographs to show the equipment.

I think you will agree with me that it usually requires nearly all of the dealer's available cash to carry his new car inventory. Of course his investment in the new cars turns over in a reasonably short period of time, but, as a rule, we would have to figure that it would take a year or more for a piece of equipment to pay for itself. The jobber follows the financial condition of the dealers on his list practically from day to day, and because the jobber is in a position to watch the dealers' condition very closely he is usually very liberal in extending credit. The regular terms as a rule are 30 days net, but it is not unusual for a jobber to let accounts run 60, 90 and even 120 for the convenience of the dealer. In many cases he does this because the dealer desires to use his ready cash to take up a sight draft for new cars, or because it is a dull season for the dealer. I believe I am fair in saying that there are a good many dealers who are now operating large and prosperous establishments who would be in other businesses today if the automotive jobber had not made it easy for them to buy equipment and supplies.

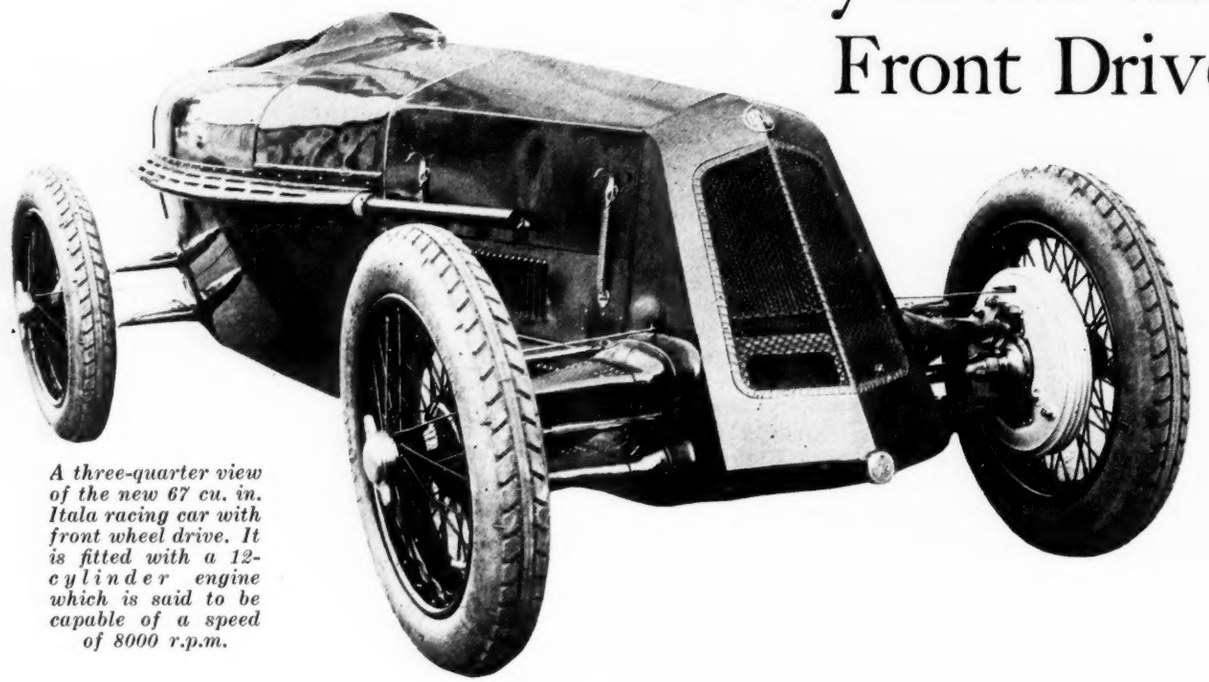
I feel that in encouraging the dealer to buy from automotive jobbers you are helping him conserve his cash for new cars, the sale of which eventually enables the dealer to pay the jobber for the equipment, not overlooking the fact that if the equipment is installed and put into proper use, each month that it operates it earns a greater shop profit for the dealer, eventually paying for itself in this way.

### Getting Dealers to Use It

The sixth point is to get the dealer to use his equipment. This isn't so difficult after the dealer has bought it and installed it, although there are certain types of tools and equipment which he must be educated to use, otherwise they merely lie around, representing an expenditure which brings in no returns. Here again the jobber's salesman seems to fit in perfectly. The jobber's salesman has sold certain equipment and made certain representations for it. If it is received and not put to good use the jobbers' salesman knows from experience that the next thing will be a request from the dealer that this particular piece of equipment be taken back by the jobber and credit allowed. It is therefore an axiom with jobbers' salesmen to follow up their sales and encourage the use of the equipment which they sell.

To show the dealer how to capitalize his equipment is a subject in itself which I think is well worth a lot of consideration. Some have worked out very effective plans for showing the dealer how to do this, others have not. This is a subject of the utmost importance as it offers one of the strongest imaginable means for selling the public on your dealers and your cars. Here again we can use the jobbers' salesmen.

# Itala Builds 67 Cu. In. Racer With 12 Cylinders and Front Drive



*A three-quarter view of the new 67 cu. in. Itala racing car with front wheel drive. It is fitted with a 12-cylinder engine which is said to be capable of a speed of 8000 r.p.m.*

**Engine has speed of 8000 r. p. m. and 100 m. p. h. is claimed at 6000 revolutions. Roots blower delivers air to cylinders. May race in America next year.**

*By W. F. Bradley*

WITH twelve cylinders having a total piston displacement of only 67 cu. in., a novel forced induction system and a special type of front wheel drive, the racing automobiles just produced by the Itala Co., of Turin, Italy, are a distinct departure from current practice. In producing this type of automobile the firm appears to have a triple object in view: To take part in racing, to meet the fairly strong European demand for a very fast, sporting type of car, and to produce aviation engines.

To get into the 67 cu. in. class, which is one of the recognized racing divisions in Europe, the bore and stroke for a twelve-cylinder engine are only 46 by 55 mm. (practically 1.8 by 2.16 in.). Experience with these racing engines has proved of value in aviation work, the firm having a 700 hp. engine of the same general design which has passed through the Italian Government 50-hour test and is now going into regular production. While, of course, many of the details are distinctive, the general features of the aviation engine are the same as those of the racing engines.

The cylinder block is a single aluminum casting with the two rows of cylinders at 60 deg. After the block has been heated in oil, steel liners are pressed in, and the detachable head for each block of six cylinders is cast of silumin. The two valves per cylinder are perpendicular to the axis of the cylinder barrel, and the whole 24 are operated by a single camshaft having 12 cams, the shaft being carried in the angle formed by the two blocks of cylinders. The timing gear is at the front end and consists of a pinion on the crankshaft, an intermediate pinion in celoron, and the camshaft pinion.

By reason of the horizontal position of the valves, the aluminum pistons have an unusual shaped head, very similar to that of a two-stroke engine, this being to give clearance for the valves and to provide for a compression ratio of 5.5. The effective diameter of the valves is 21 mm. and the weight is 20 grammes (.74 ounces); the seats are of bronze and cast iron guides are used. There is a light follower between the cam and the valve stem.

The one-piece crankshaft, which is of P4X Holtzer steel, has a very light flywheel with a ring gear for the electric starter and is carried in seven roller bearings. The connecting rod construction is peculiar in that the main rod has a roller bearing mounting on the crankshaft and the outer rod is mounted on the inner one with bronze bushings, each rod having a split end.

### Supercharger Arrangement

Another unusual feature of the engine is the supercharger arrangement. Driven off the rear of the crankshaft, through a flexible coupling, is a Roots blower which takes its air through an American cleaner. Instead of being connected up with the carburetors, the blower sup-

plies compressed air to the cylinders through ports uncovered when the piston is nearing the bottom of its stroke. The air driven into the cylinders at the end of the firing stroke forces the spent gases through the exhaust valves, while the air admitted at the end of the intake stroke dilutes the very rich charge supplied by the carburetors and changes it into an explosive mixture.

A single water pump is driven off the rear end of the camshaft, and in addition to the main lead to the water jacket there are independent small diameter high-pressure leads directed around each of the valve seats and also between adjacent cylinders. The arrangement gives a very vigorous flow of water around the valve seats and assures a high pressure flow between adjacent cylinders.

### Two Bosch Magnetos

Designed to be used as sporting models, as well as for racing, a Bosch generator is driven in tandem with the air compressor, being at the extreme rear of the engine. Ignition, however, is supplied by a couple of six-cylinder-type Bosch magnetos, driven from a cross shaft at the front of the engine, each one supplying current to a group of six cylinders. It is stated that the engine speed is 8000 r. p. m. and that with the engine running at 6000 r. p. m. a road speed of 100 m. p. h. is obtained.

A high pressure lubricating system is used, with a single oil pump. The main supply of oil, practically five gallons, is carried in the lower portion of the base-chamber, which is isolated from the upper part, so that there can be no splash, and it is of greater width than the rest of the engine. The oil is led directly to the seven main bearings and through the hollow shaft to the roller bearing connecting rods. By reason of the design of the bearing caps, oil taken to the inner roller bearing cannot escape laterally, but is forced through from this to the bronze bushings of the outer rod.

Viewed externally, the Itala engine is a metal box with a couple of carburetors attached, and at first sight it is even difficult to determine how many cylinders it contains. The valve operating mechanism is enclosed in an oil-tight housing, and yet at the same time the camshaft, valves and valve springs are more accessible than on the normal L-head engine.

Bolted up to the front end of the engine are the clutch housing, the gearbox and the transmission casing. This consists of two castings; clutch housing, gearbox and one-half of transmission housing in one unit, and forward half of transmission housing and radiator platform as the second unit, the two being bolted together.

### Transverse Drive Shafts

Front-end construction comprises two transverse drive shafts from the bevel pinion, each shaft having a spherical joint at the outer end and a sliding joint on the inner end. Viewed externally, the front end construction is symmetrical, there being an oval section casing both above and below the drive shaft, the inner ends of these casings being secured to the differential housing and the outer ends attached to the steering pivot housing. The construction above the drive shaft consists of a very broad cantilever spring, the two extremities of which are mounted between rubber blocks. The entire spring is enclosed in a sheet metal casing, which gives protection and diminishes head resistance without interfering with the free movement of the spring, for connection between the casing and the differential housing is made by means of a broad rubber band. The construction under the drive shaft is similar except that the cantilever spring is replaced by a rigid beam, with a spring mounting at each end.

The rear end construction is an exact duplicate of that at the front, minus the driving mechanism. The same differential housing is used, without anything in it, and these front and rear housings are united by armored wood frame members. The steering gear is carried on the top of the gearbox, the steering column being horizontal and the steering wheel vertical. The first models to be produced have single seater bodies with the width of 31 in.

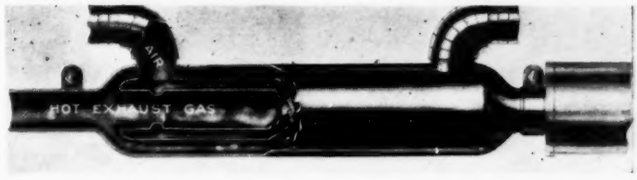
There is an exhaust pipe on each side of the car, but instead of the gases being expelled through the end of the pipe, they pass into an expansion chamber forming a portion of the rear end of the body and escape through louvres in the tail.

Front end drive allows of a very low construction, the highest part of the car being 33 in. above the ground. A perfectly flat undersurface is secured with a 7 in. clearance. Wheelbase is 98 in. and track 47 in. Fully equipped, with wire wheels having drop center rims and 27 by 4.40 in. tires, electric starter and battery, the weight of the car is only 1210 lb., with the result that when taking part in races under European rules it will be necessary to ballast the car to bring it to the minimum of 1543 lb. According to the Itala Company some of these cars will race in America next season.

## Fresh Air Car Heater

AN exhaust type heater which furnishes heated fresh air uncontaminated by motor odors and gases to the car interior has been developed by Tripp-Secord & Co., Detroit. Fresh air is drawn through an outlet funnel placed directly behind the radiator and is conveyed through a tightly sealed flexible metallic hose to the heating compartment. This units consists of a six walled chamber in which the exhaust gases are so divided that they entirely surround the air chamber and form a large protected heating area where the fresh air is heated.

The large heating chamber is also said to decrease back pressure of the motor and so increase its operating efficiency because of the greater space provided for the expanding gases. The heated air outlet is designed to throw the air along the floor of the car in any desired direction.




*Tripp-Secord fresh air heater*

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A COMPANY has been organized in Muhlheim, Germany, with the object of exploiting the patents and research results of the Coal Research Institute located in that city. An entirely new method of extracting oil from coal is to be commercially developed. This consists in the formation of unstable carbides with the aid of catalytic agents, which at the same time are being decomposed with the formation of volatile hydrocarbons. This transformation takes place at comparatively low temperatures, between 600 and 750 deg. Fahr., and at normal pressures.

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TWO bulletins have been issued recently by the Gisholt Machine Co., Madison, Wis. One contains an illustrated description of the Gisholt 3L and 4L full swing side carriage turret lathes with fixed center turrets and the other the 3L and 4L with cross feeding turret. Principal dimensions of the machines are given with standard tools used for bar and chuck work.

# Emphasize to Your Dealers and Salesmen the Importance of the *Obvious*

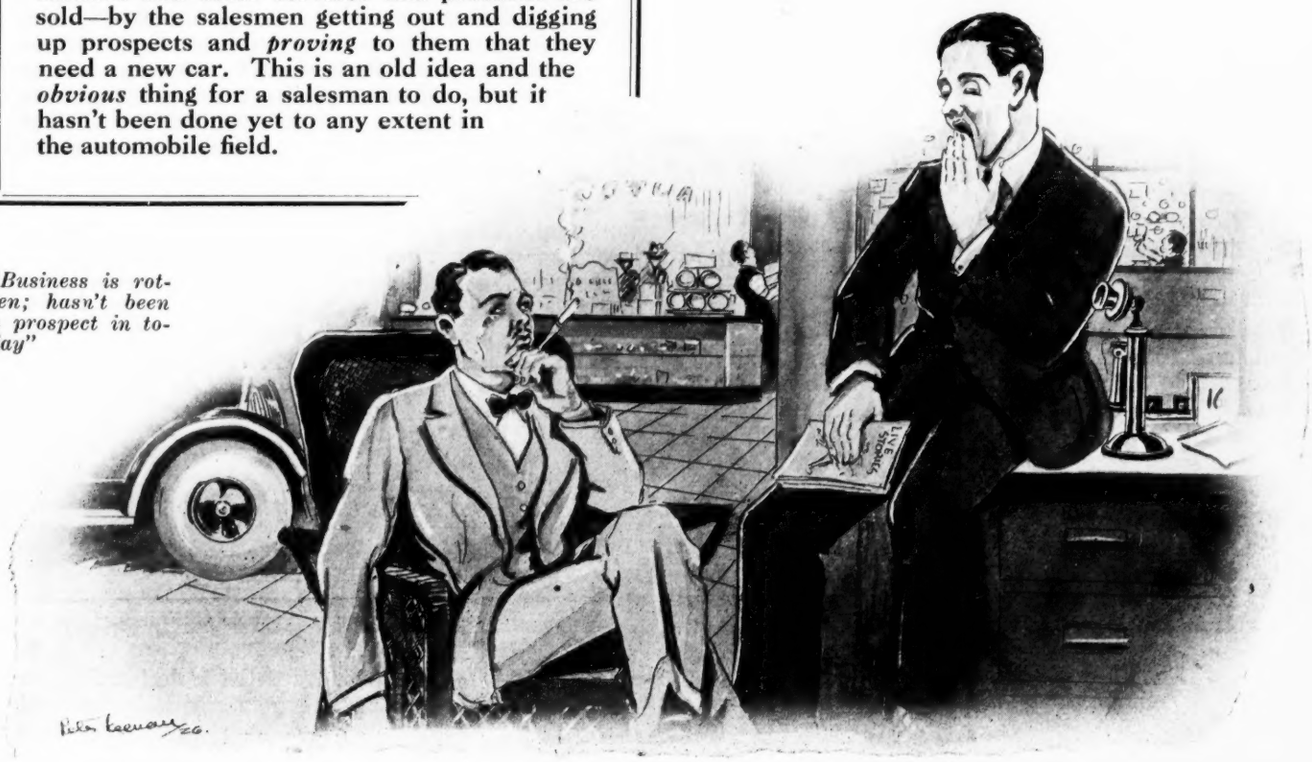
**General practice lags behind knowledge and the fact that a dealer knows a thing doesn't necessarily mean he practices it.**

*By Norman G. Shidle*

**FEW people look up insurance agents in order to buy life insurance. The agents have to go to the prospects and they have to work hard to find their prospects.**

**Automobile retail selling takes an opposite course. Salesmen as a rule wait until a prospect turns up of his own accord. If prospects don't turn up the salesmen complain that business is poor.**

**The point emphasized in this article is that automobiles can be sold in many cases as insurance and other services and products are sold—by the salesmen getting out and digging up prospects and *proving* to them that they need a new car. This is an old idea and the *obvious* thing for a salesman to do, but it hasn't been done yet to any extent in the automobile field.**



*"Business is rotten; hasn't been a prospect in today"*

PRACTICE always runs behind knowledge. That is inevitable. But it is hard to realize sometimes how far behind it is in selling automobiles at retail.

Look at this statement that appeared in a recent bulletin sent regularly by a big New York distributor to his salesmen:

"Run through your prospect file," the bulletin urges, "and select the names of all those people who never have owned a car before. They are the very finest prospects a salesman can have and yet something has kept you from closing them or they would not still be prospects—they would be owners."

The pristine truth embodied in this simple statement has been common knowledge among sales executives for twenty years. But to make such a statement in a bulletin to salesmen today is entirely pertinent just the same because general practice lags twenty years behind knowledge.

This is a good point for manufacturers to have in mind when building educational courses and directing educational activities to the retail salesman. If the retail salesman can be influenced through factory efforts to practice consistently and intelligently a few simple, common-sense methods which everybody agrees should be a part of intelligent selling, very great improvement would result.

After all, the retail salesman usually falls down on the things that a sales executive would be inclined to think anybody would have sense enough to do. He fails worst in the simple things of selling, rather than in the complex ones.

Take the question already cited, for example, that of soliciting business from people who don't own cars. It's easy to sit around and prove to oneself that there are not many people like that left and to generalize that group into insignificance. But there are people who don't own automobiles, who have enough money to buy them, and who might be sold.

In one organization in a metropolitan center there are today three men, each of them holding responsible positions and earning enough to pay a fair income tax every year, *who never have been asked to buy an automobile.* Think of it! Nobody ever has asked any of them to buy an automobile. They live in respectable communities, belong to athletic clubs, have private offices and give all the necessary outward signs of being good prospects for automobiles. But nobody ever has asked them to buy a car.

Unusual cases? Perhaps—but perhaps not. In every section of the country there are others like them without a doubt. We learned recently of a very prominent business man who had a suite of offices in the main building of a town of 35,000 population for seven years before he was solicited by an automobile salesman. And when he was solicited he bought.

In factory efforts to educate dealers and retail salesmen it is still worth while to emphasize the simple, commonsense things that so often make or break a sale. The trade publications going to dealers have recognized that fact clearly and year after year they hammer away at the fundamentals, presenting them in a fresh garb and bringing them up to date so that they attract new interest and gradually increase the effectiveness and efficiency of automotive retail selling. The same principles are involved in any educational work which may be attempted directly by the factories.

It may seem trite to keep telling dealers and salesmen to "ask 'em to buy," but so long as the admonition goes unheeded in many instances repetition is necessary. And even this simplest of selling rules still goes begging frequently.

As a somewhat more comprehensive example than the specific cases cited above, witness an investigation of sales practices of a number of large selling organizations which was made recently by a big oil company.

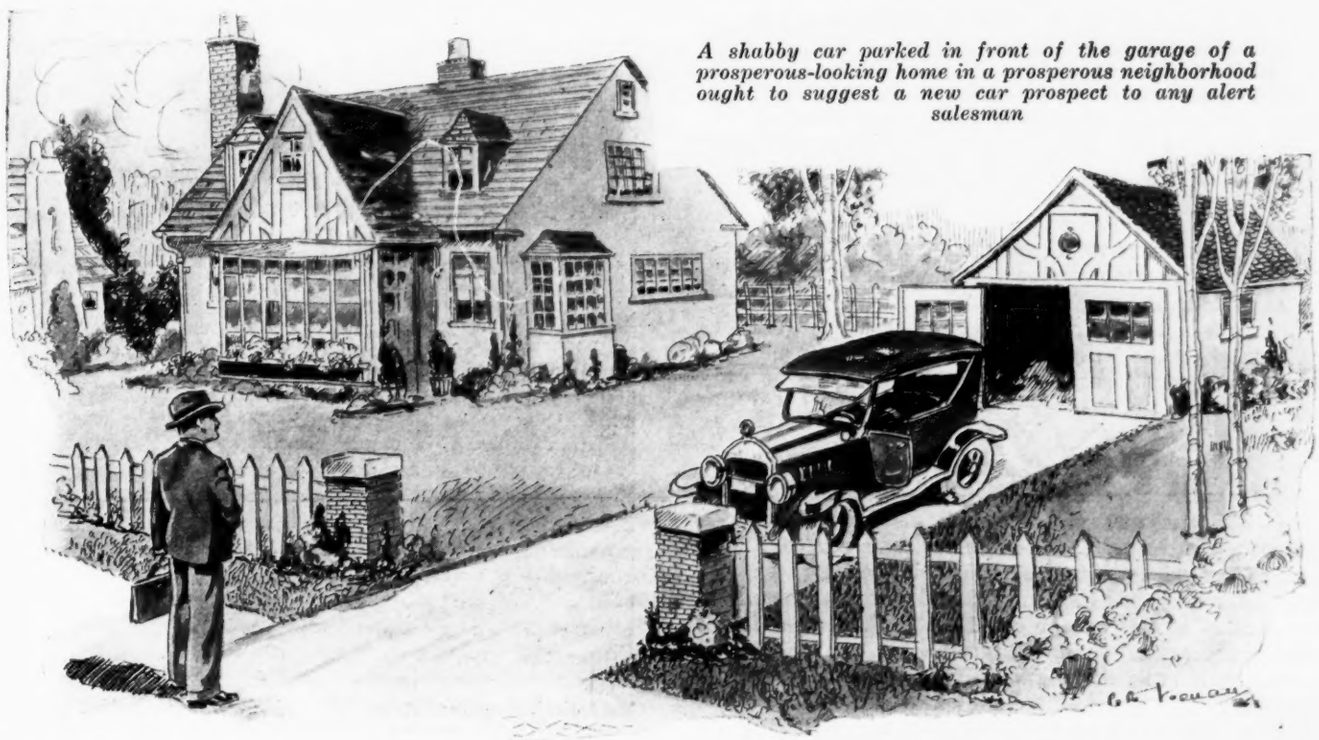
"It was found," says a house organ of Dorrance, Sullivan & Co., "that of 100 per cent of their collective potential opportunities or prospects, only 48.2 per cent received even a single call by salesmen.

"The striking result of the study is first of all the fact that 51.8 per cent of the companies' prospects were never called on."

In good times and in dull, the complaint is heard constantly from prospective car buyers that salesmen can't sell; that few salesmen know their car well, as regards automobiles, many are bought but few are sold.

Frequently the troubles of the man who wants to buy a car have been put into writing, but perhaps not frequently enough. A letter we received this morning from an executive of a prominent truck manufacturing concern, emphasizes so well the continued existence of fundamental deficiencies in the simple phases of retail selling that it's worth publishing. Here's what our correspondent says:

> "Each week as your valued paper comes to my desk I look with great expectancy for an article on the need for real selling in the passenger car industry. It may seem like a needless thought with production running so high. But have you ever thought how really few cars are actually sold and how many are bought despite the salesmen?
>
> "What prompts this outburst in this, I have what might be called a real old car these days—a 1923 4-cylinder Hupp. It looks bad and certainly doesn't enhance the landscape in front of our house. Friend Wife would like to see it pass from our lives entirely. But—each time I start to purchase (note the word) a new car I get disgusted and proceed to take the rattles out of the old one for another month.
>
> "When one enters the average show-room a sleek, soft-spoken chap with polished hair usually saunters up and asks, 'Is there something I can do for you?' That question in itself is enough to make me see red. He proceeds to give me a long, flowery vague disser-



*A shabby car parked in front of the garage of a prosperous-looking home in a prosperous neighborhood ought to suggest a new car prospect to any alert salesman*

tation on the merits of his particular car, telling me nothing but using hundreds of words to do so.

"Finally I get sufficiently bored at his attempts to find out who I am in an indirect manner and postpone the new car on the general basis that I won't contribute an unearned commission to any car salesman I have met in visits to several dozen New York agencies.

"Has a salesman ever approached me on the subject of buying? Certainly not. I am supposed to go to the agency, much as one visits a chain-store and make my needs known. That isn't selling in my conception. Certainly truck builders would starve to death on that basis.

### Ways of Getting Leads

"How can the local dealer know I'm in the market if I don't voluntarily seek him? Several ways. In the first place, the old bus stands in front of the house for many hours and a real salesman might suspect that a resident of a good neighborhood could well afford a better car than I have. It also stands in front of the plant all day—another way of getting leads.

"Then again, I pay an income tax to both State and Government which might afford a clue. It would have last year. Registration of vehicles shows that I own a 1923 car and live in a neighborhood that would be worthy of a better car if only for social reasons. There are numerous other ways of discovering that I really should have a new car—payment of city taxes on real estate, published contributions to the local church, membership in local clubs. But has any enterprising agency ever bothered to solicit an order?

"I think it would be a downright cinch for a salesman to come to me with a concrete proposition showing how much money it will cost me to buy his car, trade-in considered. He probably could get the order one night and the cash balance as soon as the car could be delivered.

### Going After Business

"All of which suggests that manufacturers might well point out to dealers a simple, workable scheme of going after the people who should have new cars, whether they realize it or not. This would take the salesmen into new fields and also bring to light many prospects indirectly. It would leave the "shoppers," who haunt showrooms for months before buying, to the less progressive dealers.

"Likewise, it would seem advisable for manufacturers to do more educational work with dealers' salesmen to enlighten them why the particular make is a good purchase. Each salesman seems to have the same story and could sell one make as well as another. Surely there are things of interest and importance to be said about the most drab automobile. There must be some reason for buying a Sap Six, other than the fact that it has six cylinders, four brakes, four doors and balloon tires."

If this were an isolated complaint it wouldn't be important. But it isn't. The same general line of thought was expressed by a former automobile factory executive only a few months ago as a result of his experience in trying to buy a new car at the New York show last year. Many others find similar difficulties.

Reiteration and driving home of the common-sense fundamentals of courtesy, ordinary use of intelligence and adherence to the simple, obvious means of making sales may well continue to be emphasized in factory efforts toward dealer and retail salesmen education. The job of salesmen education at present is to bring practice closer to knowledge, rather than to search for new and striking methods.

---

## Fairchild Coincidental Lock

A THEFT protective device which automatically locks the steering gear when the ignition is turned off and from which the key must be removed before either operation is completed is being manufactured by the Fairchild Lock Corp., New Haven, Conn.

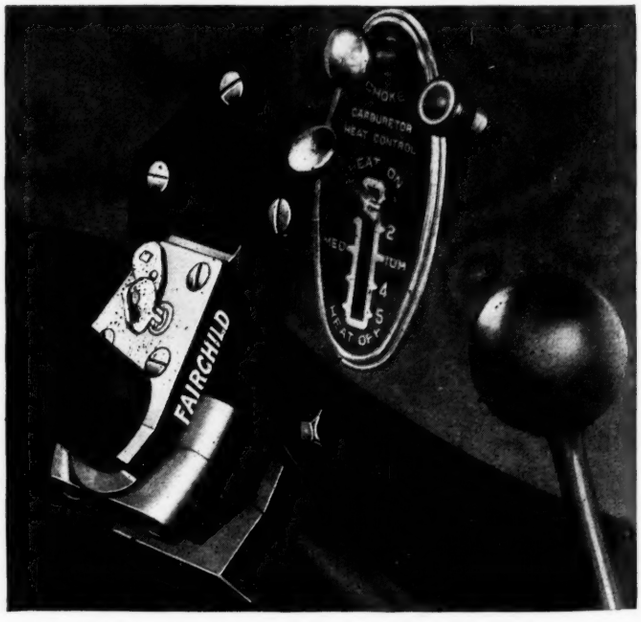
Two models are available. One, called the Group 1 Model, is a full coincidental lock which has received Group 1 rating from the Underwriters and which prevents shutting off the ignition without locking the car. A second model, called the Group 1-A Model, is similar to the Group 1 Model except that it has an additional key position at which the ignition is shut off with the car unlocked.

By so arranging the device that neither the operation of shutting off the ignition nor that of locking the steering gears can be completed until the key is removed the manufacturers believe they have overcome the disadvantages which some types of steering gear coincidental locks are said to possess in that they may become sources of accidents while descending hills.

With the Group 1 model the only way in which the car can be left unlocked is to leave the engine running with the key still in the lock. To stop the engine the key must be removed and this also locks the car.

The lock is installed on the steering post and makes unnecessary the usual ignition switch on the instrument panel. An additional feature in connection with this lock is a "clean-cool" device, use of which is licensed without cost to manufacturers installing Fairchild Group 1 locks upon their cars as standard equipment. This device consists of a small knob on the instrument board by pulling which gas can be cut out of the motor in descending grades and a full charge of fresh air fed to the cylinders instead, cooling and cleaning the cylinders and valves.

With this device full compression is retained with full braking power of the motor.




*Fairchild coincidental lock, showing installation on steering post cowl bracket*

# Incomplete Combustion a Leading Factor in Limiting Engine Pressure

**Ranks equally with increasing specific heat, according to conclusion reached by British engineer in paper presented at Faraday meeting. Session devoted to study of explosions.**

THERE appears to be little doubt that incomplete combustion of the charge ranks equally with increasing specific heat as a primary cause limiting the pressures developed in gas engines. This is one of the conclusions reached by Prof. W. T. David in a paper on "Combustion in Gas Engines" which was read as part of a discussion on "Explosive Reactions in Gaseous Media," held at the headquarters of the Institution of Mechanical Engineers in London, on June 14, under auspices of the Faraday Society.

Fortunately, Professor David said, after-burning did not affect the thermal efficiency of a gas engine to any serious extent provided that the ignition timing was arranged so as to give a reasonable vertical explosion line in the indicator diagram, for the bulk of the after-burning took place in the early stages of the expansion stroke; and, indeed, from the point of view of mechanical design it was an advantage, in that it tended to reduce the ratio of the maximum pressure to the mean effective pressure.

Various factors influencing the rate of combustion in gas engines were discussed. Of them, the author referred particularly to turbulence, and said that the greater the degree of turbulence or eddying of the gaseous charge, the more rapidly would inflammation spread. Experiment showed that the time of explosion of a stagnant gas engine charge in a closed vessel was very much greater than that of a charge of similar combination in the cylinder of a gas engine of which the combustion space had the same volume as the closed vessel. Indeed, were that not so, gas engines could not run at present-day speeds—at any rate, with the normal ignition advance.

### Influence of Turbulence

The reason why turbulence had such a great influence on the rate of burning would appear to be that, owing to the actual motion of the gaseous charge, parts of the portion first inflamed were carried to various quarters of the charge, and, in effect, a large number of ignition centers were set up. Experiments by Hopkinson showed that a degree of turbulence beyond a certain point had little influence on the rate of explosion. The experiments were made in a closed vessel in which an eddying motion of the mixture was produced by a fan. The degree of turbulence produced by the fan running at 2300 revolutions per minute decreased the time of explosion from 0.14 sec. for the stagnant mixture to 0.03 sec., while the turbulence produced by a fan running at twice that speed effected only a small further decrease in the explosion time.

H. T. Tizard in a paper on "Explosions in Petrol Engines" said the study of the nature of explosions in internal combustion engines had a direct practical aim of great importance, namely, that of increasing the thermal efficiency of the engine. The petrol engine, judged by present-day standards, was already an extremely efficient machine; yet, anyone discovering a practical method of so controlling the rate of combustion of fuels as to enable the average expansion ratio of petrol engines to be raised from, say, 5:1 to 7:1—an alteration which involved little or no engineering difficulties—would save the country several million pounds a year.

### Theoretical Study

He referred to a theoretical study, made by D. R. Pye and himself a few years ago, on the basis of the most reliable figures then available for the specific heats of gases, and for the dissociation of carbon dioxide and water vapor at high temperatures. The chief results of that study were (*a*) that the marked dissociation of carbon dioxide at the temperatures reached in petrol engines was sufficient to account completely for the main features of such engines, namely, that maximum power first occurred with slightly "rich" mixtures, and remained practically constant over a considerable change in strength of mixture; (*b*) that the calculated theoretical efficiencies agreed very satisfactorily with those observed under the most favorable conditions when loss of heat during the expansion stroke was taken into account.

Assuming the correctness of the fundamental data used for the investigation, it followed that there was little chance of improvements in design bringing about a substantial increase in the thermal efficiency of an engine operating at a definite expansion ratio, say, 5 to 1. Improvements that had taken place, however, were definitely greater than he had expected.

The present paper reviewed recent accurate experiments on that question, and the result of the review was that specific heat of $CO_2$ at high temperatures was somewhat lower than that given by Bjerrum, that of water vapor was considerably higher, while dissociation of $CO_2$ was about the same. The net effect was that the ideal efficiencies given by Pye and himself were, if anything, too high. There was nothing in those figures which explained why the thermal efficiency of the petrol engine was as high as it was. A possible explanation was that the figures for dissociation, consistent though they appeared to be among themselves, were too high, and that either equilibrium was not reached at 2500 deg. Cent. before the gases started to cool rapidly, or, more probably, that such large differences in temperature existed in the gas after explosion that it was inadmissible to calculate specific heats and dissociation on the assumption that the temperature was uniform.

The question of detonation in petrol engines was also discussed, and reference was made to suggestions recently put forward by Callendar, which, though open to obvious objections, threw a new light on the subject and brought a

number of scattered observations together.

Callendar's point of view was that the vapor of a hydrocarbon of high molecular weight would tend to condense when compressed adiabatically. He pointed out, therefore, that after compression in the engine, there would be a tendency to form liquid drops particularly of the higher boiling constituents, and he held that such drops would be far more reactive than the vapor, and that, therefore, self-ignition would be much more easily promoted. The effect of the addition of another so-called anti-knock substance was, according to his view, to mix with these nuclear drops of easily ignitible substance and to protect them from pre-ignition.

### Causes of Detonation

Mr. Tizard considered that some modification of Callendar's theory would prove to be the right explanation of the cause of detonation in engines when the fuel used consisted either of a liquid hydrocarbon of high boiling point or of a mixture containing a considerable proportion of hydrocarbons of high boiling point, but that it did not apply to the phenomena observed when the hydrocarbon or other substance observed was very volatile, in which case the determining factor in promoting detonation was more probably simply the attainment of very high temperature in some portion of the gas during the explosion.

The effect of metallic sols in suppressing detonation in internal combustion engines was discussed on the basis of experiments by Flight-Lieutenant E. J. Sims, assisted by Dr. E. W. J. Mardles. In the experiments, small additions of certain metals in colloidal form were made to the liquid fuel, with a view to elucidating the physical and chemical actions that must occur in order that detonation might be prevented or controlled. Colloidal solutions of lead, iron, gold, carbon and nickel were prepared, and used as engine fuel immediately after preparation, since on aging, the particles tended to aggregate and become oxidized or poisoned. The results showed that the colloidal sols of iron, lead and nickel were just as effective as the organometallic compounds, such as lead tetra ethyl, and in some cases slightly more so. In the case of gold a negative result was obtained.

The effectiveness of the colloidal metal sols, freshly prepared in an inert atmosphere, supported in a striking manner the view that it was the metal alone which was the active agent. Although it was improbable that active colloidal sols could be used commercially on account of the difficulty of keeping them for any length of time in a state of stability and activity, their efficacy suggested likely substances which would be practicable, viz., those organometallic compounds which readily broke up thermally into active or pyrophoric metal particles; for example, the alkyl and aryl derivatives of metals which could exist in the pyrophoric state, also that nitrosyls, carbonyls, oleates, ethylenes, &c., of those metals.

### Activity of Metal Particles

In the discussion Prof. H. B. Dixon expressed the view that the small particles of metal which produced anti-detonating effects were active particularly during the initial part of the explosion rather than after the explosive wave had been started. D. Finlayson, referring to a prediction of Mr. Tizard that methane could not possibly be detected during the expansion stroke and should only be present when the temperature was of the order of 1000 deg. Cent., said that previous observers had frequently referred to the presence of methane in exhaust gases. In experiments with which he had been associated, no methane whatever was found when benzol was the fuel, and when petrol was the fuel there was only a small trace of some hydro-carbon compound, which did not increase in proportion to the hydrogen content. The probable explanation was that the hydrocarbon present was due to the heavy ends of the original petrol which has escaped decomposition until late in the engine cycle.

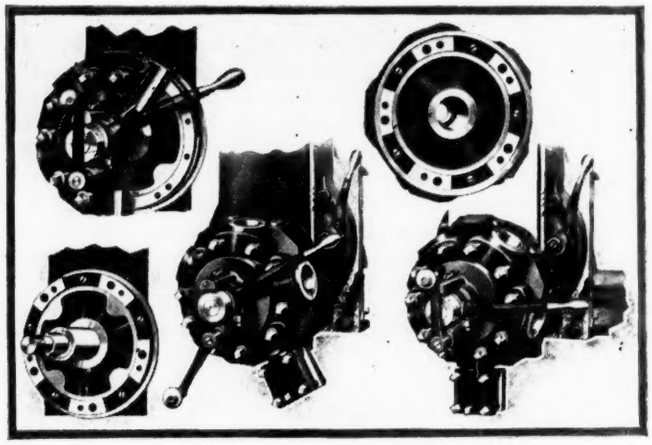
Professor Marks (Harvard) referred to the use of a catalyst, viz., cerium oxide, as a coating on the cylinder head, which, in the case of an engine of low efficiency and comparatively low speed, improved the efficiency by about 20 per cent.

Mr. Watmore said that his experiments showed that the detonation problem was much more severe with higher induction pipe temperatures.

The program was divided into two parts, the first part dealing with explosive reactions in general and the second part with explosions in internal combustion engines. During the first part of the chair was occupied by Prof. H. B. Dixon, while during the second part Sir Dugald Clerk presided. The abstracts of the papers given above, dealing with the second part, are from a report of the meeting in *The Engineer*.

## New Bullard Turret Design

THE accompanying photograph shows the new turret design of the Bullard Machine Tool Co., Bridgeport, Conn., which is improved particularly in the turret-locking feature. This comprises two steel rings, screwed and doweled to the inner side of the turret and the face of the main slide, and providing five pairs of opposed bevel surfaces which mesh positively and accurately at the five points of turret registry. In addition to the greater



*New Bullard turret design*

strength and accuracy which this construction provides, the mating of these rings on opposite bevel surfaces assures longer life and maintained accuracy.

THE French Government has been consulting with manufacturers in regard to supplying suction gas generators for gasoline-electric locomotives equipped with Panhard four-cylinder 120 hp. engines of 6½ in. bore and 7¼ in. stroke. running at a normal speed of 1200 r. p. m. The proposed tests comprise two series, one at the expense of the manufacturer, the other at the expense of the Government. The first includes a bench test and minute inspection of the gas generator and its accessories and a trial on the road over a distance of 30 miles hauling 120 tons at a speed of 2¼ miles per hour. In the second series, to which only those apparatuses would be admitted which had come satisfactorily through the first series, there is included an endurance run over nearly 2000 miles in which the locomotive must haul 120 tons.

# Tariff Study Shows Import Taxes on U. S. Cars in 20 Foreign Markets

## Duties levied against automotive products of other countries also included in data compiled by Government officials

CUSTOMS duties and surtaxes on American passenger cars, trucks and buses in 20 of the principal markets of the world are shown in a table compiled recently by the Automotive Division, Bureau of Foreign and Domestic Commerce, with the aid of the Division of Foreign Tariffs. Since the chief restrictions on foreign sales of American motor vehicles are tariffs and the various internal taxes levied upon them, a knowledge of these items is a prerequisite to any study of export markets.

In general the highest tariffs are found in countries where automobiles are manufactured, and where it is natural that they would be imposed for the protection of the domestic industries. There are exceptions, however, to this general rule.

The value of United States automobile shipments to the twenty markets covered was, during 1925, approximately $180,000,000, representing an increase of over 70 per cent of the $105,406,844 valuation of exports to the same markets during 1924. These countries were the destination for over 80 per cent of the total passenger car truck and bus valuation amounting to $222,609,132 for the year 1925.

The Automotive Division warns that the transitory nature of foreign customs, duties and surtaxes must not be overlooked in studying this table. The tariffs so listed are subject to constant change, and the present tabulation must not be regarded as a permanent schedule. In a similar tabulation made in 1925, 18 of the leading markets for passenger cars during 1924 were surveyed. In the 18 markets covered at that time, which are treated here, with the exception of the practically-non-competitive Philippine Island market—there have since been changes in the tariff treatment of automobiles in five countries, United Kingdom, Australia, Canada, Union of South Africa and Cuba, the most important change being of course in the United Kingdom which at that time had no tariff on either passenger cars or trucks.

The customs duties stated below are for both passenger cars and trucks unless otherwise specified. Wherever the duty is expressed in percentages, the ad valorem basis is employed.

| Country Importing | Customs Duties, given to exporting country; sales taxes and surtaxes per 100 kilos |
|---|---|
| **ARGENTINA** | **Per Cent** |
| Duty to all countries | 25 |
| Surtax additional | 7 |
| (Duty is based on a list of prices in "Motor Age" plus 10 per cent, converted at the normal rate of exchange.) | |
| **AUSTRALIA** | **Per Cent** |
| Chassis assembled not including rubber tires | |
| Duty to England | 5 |
| Duty to Canada | 12½ |
| Duty to all other countries | 17½ |
| Chassis unassembled not including rubber tires | |
| Duty to England | Free |
| Duty to Canada | 7½ |
| | **Per Cent** |
| Duty to all other countries | 12½ |
| (Duty is assessed on component parts, whether shipped complete or not. The dutiable value is the current domestic value, which includes the cost of packing, carting, and freight to the port of departure plus 10 per cent that is added to cover ocean freight and related charges.) | |
| **BELGIUM** | |
| Preferential duty to the United States, United Kingdom, Canada, France and Italy— | **Francs (per 100 kilos)** |
| 4000 kilos and more | 240 |
| 2000 to 4000 kilos | |
| Passenger cars | 640 |
| Trucks | 336 |
| Less than 2000 kilos | |
| Chassis, complete without body, weighing 1300 kilos and less | 576 |
| Chassis, complete with body, weighing 1800 kilos and less | 576 |
| Others | 640 |
| (General duty to Germany and Czechoslovakia is double the above.) | |
| | **Per Cent** |
| Transmission tax, collected on the declaration at time of importation | 1 |
| Luxury tax, collected, at time of sale to consumer | 6 |
| (Specific duties are levied on net weight. Ad valorem duties are levied on c.i.f. value at port of entry.) | |
| **BRAZIL** | **Per Cent** |
| Duty to all countries | |
| Passenger cars | 28.819 |
| Trucks | 23.005 |
| (Based on c.i.f. price at port of entry; rates given above include the 2 per cent gold surtax.) | |
| **BRITISH INDIA** | **Per Cent** |
| Duty to all countries | |
| Passenger cars | 30 |
| Trucks and Buses | 15 |
| (Based on wholesale cash price, less trade discount at time and place of importation, less duties; or the actual cost.) | |
| **CANADA** | **Per Cent** |
| Duty to United States and other non-treaty countries | |
| Passenger cars valued at over $1200 | 27½ |
| Passenger cars valued at $1200 or less | 20 |
| Trucks | 20 |
| Duty to France, Italy and Belgium | |
| Passenger cars valued at over $1200 | 25 |
| Passenger cars valued at $1200 or less | 17½ |
| Trucks | 17½ |
| Duty to United Kingdom | |
| Passenger cars valued at over $1200 | 15 |
| Passenger cars valued at $1200 or less | 12½ |
| Sales tax | 5 |
| Excise tax on passenger cars: | |
| On value up to and including $1200 | 5 |
| On value in excess of $1200 | 10 |
| (Duty is assessed on wholesale market value in country of origin. Sales and excise taxes are assessed on duty-paid value.) | |
| **CUBA** | **Per Cent** |
| Duty to United States | 25 |
| Duty to all other countries | 31.25 |
| Surcharge when $500 or under | 3 |
| Surcharge when over $500 | 10 |
| (Based on wholesale value in country of origin, increased by packing and other costs incidental to preparation for shipment but not including consular fees, insurance and freight charges. Surcharge is a percentage of duty.) | |

## CZECHOSLOVAKIA

| | Per Cent |
|---|---|
| Duty to countries having most favored nation status including the United States | 45 |
| Duty to countries not having most favored nation status including Canada | 65 |
| Import license fee | ½ |
| Luxury tax on passenger cars having a total cylinder content of 1.95 liters | 10 |
| Turnover tax levied on all automobiles | 2 |

(Based on retail value in country of origin plus packing and all transport costs to Czechoslovakia frontier; import license fee based on invoice value; luxury and turnover tax on duty paid value.)

## DENMARK

| | Crowns per kilo |
|---|---|
| Duty to all countries | 0.25 |
| | Per Cent |
| plus ad valorem | 5 |
| Sales tax when actual purchase price is not over 2000 crowns | 15 |
| Sales tax when actual purchase price is over 2000 crowns but under 5000 crowns on the 2000 crowns | 300 |
| Per cent of balance | 20 |
| Sales tax when actual purchase price is over 5000 crowns but under 10,000 on the 5000 crowns | 90 |
| Per cent of balance | 25 |
| | Crowns |
| Sales tax when actual purchase price is over 10,000 crowns but under 15,000 crowns, on the 10,000 | 2150 |
| | Per Cent |
| Per cent of balance | 30 |
| | Crowns |
| Sales tax when actual purchase price is over 15,000 crowns, on the 15,000 | 3650 |
| | Per Cent |
| Per cent of balance | 40 |

(Specific duties are based upon net weight; ad valorem duties are based on the c.i.f. value (including cost of packing) at port of entry; taxable value is the total purchase price of the vehicle in Danish currency.)

## FRANCE

| | Per Cent |
|---|---|
| General rate, particularly to Germany | 180 |
| Preferential rate for the United States, United Kingdom, Canada, Italy, and Belgium | 45 |
| Luxury tax on duty-paid value | 12 |
| Sales tax on duty-paid value | 2 |

(Basis of value is substantially c.i.f.)

## GERMANY

Duties to be effective July 1, 1926:

All treaty countries including the United States

Automobiles weighing each net:

| | Reichsmarks per 100 kilos |
|---|---|
| Up to 500 kilos | 225 |
| More than 500 kilos up to 900 kilos | 175 |
| More than 900 kilos up to 1200 kilos | 175 |
| More than 1200 kilos up to 2200 kilos | 190 |
| More than 2200 kilos up to 3200 kilos | 160 |
| More than 3200 kilos | 135 |

To all non-treaty countries including France and Canada

Automobiles weighing each net:

| | |
|---|---|
| Up to 500 kilos | 225 |
| More than 500 kilos up to 900 kilos | 225 |
| More than 900 kilos up to 1200 kilos | 225 |
| More than 1200 kilos up to 2200 kilos | 225 |
| More than 2200 kilos up to 3200 kilos | 160 |
| More than 3200 kilos | 135 |

| | Per Cent |
|---|---|
| Sales tax assessed on pleasure vehicles only | ¾ |

(Duty based on gross weight decreased by tare of 13 per cent; sales tax based on duty-paid value.

## ITALY

| | per 100 kilos Gold Lire |
|---|---|
| Duty to all countries on cars weighing— | |
| Up to 400 kilos ..... Plus 35 | 120 |
| 400 to 900 kilos ..... per cent | 115 |
| 900 to 1600 kilos ..... ad-valorem | 65 |
| 1600 to 2500 kilos | 75 |
| 2500 to 4000 kilos | 95 |
| Over 4000 kilos | 60 |
| | Per Cent |
| Luxury tax (ad valorem) on passenger cars of more than 25 horsepower | 2 |
| Sales tax on other cars | 1 |

(Net weight is taken as the basis of weight Ad valorem duties are based on c.i.f. value as stated on the invoice.)

## JAPAN

| | Per Cent |
|---|---|
| Conventional duty to United States, Canada, United Kingdom, France, Belgium and Italy | 35 |

(Based on current wholesale market value at the port of entry.)

## MEXICO

| | Per Cent |
|---|---|
| Duty to all countries | 10 |
| Federal Surtax | 10 |
| Municipal Surtax | 2 |
| Consular fee | 5 |
| Sales tax | 10 |

(Duty based on invoice value plus expenses to point of entry; federal and municipal surtaxes based on 10 and 2 per cent of duty, respectively; sales tax based on retail sales value; consular fee based on value at point of exit from the United States.)

## NETHERLANDS

| | Per Cent |
|---|---|
| Duty to all countries | 12 |

(Based on c.i.f. value at port of entry.)

## NEW ZEALAND

| | Per Cent |
|---|---|
| Duty to Great Britain, its dominions, possessions and and colonies, including Canada | 10 |
| Duty to other countries including the United States | 25 |
| Primage tax | 1 |

(Dutiable value based on current domestic value of goods sold in equal quantities in the country from which exported plus 10 per cent; primage tax based on dutiable value.)

## SPAIN

Conventional duty to United States, United Kingdom, France and Italy, on passenger cars and chassis weighing:

| | Gold pesetas per kilo net |
|---|---|
| Up to 800 kilos | 0.75 |
| 800 to 1200 kilos | 0.90 |
| 1200 to 1600 | 1.05 |
| 1600 to 2000 kilos | 1.20 |
| 2000 to 2400 kilos | 1.75 |
| More than 2400 kilos | 2.00 |
| Trucks and truck chassis | .75 |

(The United States enjoys the above low rates by temporary agreement. Canadian cars now pay second-column duties, which are substantially 33 1/3 per cent greater than the above; rates assessed on cars from Germany and Belgium are between the second column and the conventional rates.)

## SWEDEN

| | Per Cent |
|---|---|
| Duties to all countries | 15 |

(Dutiable value is the c.i.f. value, cost of packing included.)

## UNION OF SOUTH AFRICA

| | Per Cent |
|---|---|
| Duties to all countries | |
| Passenger cars | |
| of a f. o. b. value not exceeding £400 | 20 |
| of a f. o. b. value exceeding £400 but not over £600 | 22 |
| of a f. o. b. value exceeding £600 | 25 |
| Chassis imported for domestic bodies | 15 |
| Trucks | 20 |
| Truck chassis imported for domestic bodies | 5 |

(Duty is assessable on either the true current value for home consumption in the open market of similar goods in the principal markets of the country from which the goods are imported, and at the time of shipment, including cost of carriage to port of shipment and the cost of packing, and packages, but not including agents' commission when such commission does not exceed five per cent or the actual selling price to the South African importer whichever value shall be the higher.)

## UNITED KINGDOM

| | Per Cent |
|---|---|
| Duties to non-British countries including the United States | 33 1/3 |
| To British Dominions, including Canada | 22 2/9 |

(The value of imported goods for purposes of duty assessment is taken to be the price which an importer would give for the goods if the goods were delivered to him freight and insurance paid, in bond at the port of importation, and duty is payable at that value as fixed by the Commissioner of Customs and Excise.)

THE FORUM

# *Used Car Clearing Houses*

## Another Suggested Solution for the Used Car Problem

*Editor* AUTOMOTIVE INDUSTRIES:

With reference to the articles "Special Used Car Dealers Under Factory Franchise Suggested," appearing in "The Forum" section of your June 17 issue, and "New Factory Executive Coming—He's the Used Car Specialist," appearing in your April 8 issue, I would like to be allowed to make the following suggestions:

It seems that despite the fact that the importance of the used car problem is being shared by everybody, and despite the fact that everybody appears to realize that "the used car is the outstanding sales problem before the automobile manufacturer"—to use the wording of one of the mentioned articles—very few people at the same time go beyond such statement of the seriousness of the situation and still fewer offer a practical solution of the problem. All the good suggestions as a rule do not go beyond a repeated emphasis of the disastrous effect the problem will inevitably bring about, should it not be solved at an early date, and beyond the good advice thoroughly to study and analyze the situation. They do not go beyond proclaiming the necessity of coordination between the manufacturer and dealer. The moral of most lengthy talks and writings is, "the manufacturer must help and instruct the dealer," but at the same time no concrete method is offered.

The premise has been sufficiently well established:

1. The used car situation is a menace to the industry.
2. Delay of action will bring about a crisis.

This is quite firm, everybody agrees upon it, and there is no use going into any further studies and discussions. When a car is left for a long time out in the rain, in order to prevent it from rusting it should be driven under shelter and thoroughly wiped; there is no use discussing and analyzing just how long it will take and exactly what parts will rust—it must be taken into a garage.

It is time to substitute action for words and it is time that some measures be taken.

Mr. Brayton's article is the first I have come across that offers a concrete solution, but in my estimation does not approach the subject from quite the proper angle. Instead of engaging, however, in a lengthy criticism of his system, I will try to describe as briefly as I can my own idea of a solution.

The problem is the usual loss on used car transactions, and the main factor complicating its solution is the impossibility of segregating it from the sale of new cars. The majority of sales in the States are replacements only a very small portion being sales to new car owners. It is impossible to do away with the prospects' habit of trading-in their old cars when buying a new one, and the used car problem has consequently become the problem of the industry as a whole.

The gravity of the problem is the excessively high price at which the dealers accept the traded-in cars in order to put over a sale and obviate the loss of a prospect. Such cars usually can subsequently be sold only at a loss, and the solution of the problem lies in the organization of used car price control.

The matter does not require any further and deeper study—it is the prices, and only prices that govern the question.

The f.o.b. factory prices have eliminated the possibility of wild trading in new cars, and if a standard price control system for the used cars as well could be established, the problem would be solved. Wherever there is a market for new, there is also a market for used cars; the difficulty of the dealers in disposing of their used cars stock is not in the lack of demand, but in the prices they have to charge, in order to cover their own expenses.

Under the present conditions of chaos, the prospect goes on "shopping" until he finds a dealer who offers him the highest price for his old car. In addition to all other evils this endangers the loyalty of the prospect, and as long as the wild gamble on prices is not checked no betterment can be expected.

Since prices are the main and only concern, the problem can be solved through the centralization of the necessary control.

1. Used car Clearing House must be established in each sales zone by each manufacturer, and controlled by the latter.
1. The dealers must be forbidden to accept any trade-ins without the proper valuation certificate issued by the local Clearing House and in no cases to allow higher prices than called for on such certificates.
3. The valuation of the Clearing Houses must be based upon: Possible conservative resale price after reconditioning, minus reconditioning expenses; reasonable minimum reserve for overhead; reasonable per cent of profit on the transaction.

Competing dealers not compelled by the manufacturers to belong to a local Clearing House and continuing their wild trade and chaotic gambling would undoubtedly very soon be forced out of business, since the existing Clearing House valuations would automatically check the inflation of their used car resale prices.

I will not go into organization details—they are the task of those who will finally give up academic discussions for actions.

Why not pass the rubicon, and why not take the necessary measures immediately?

M. P. TROYAN,
*224 West 57th St., New York City.*

# Advertising Now Accepted as Builder of Permanent Business Values

***Industrial campaigns responsible in large measure for growth of many firms. Reputations once established in the industrial field are easily maintained.***

By Ezra W. Clark*

*Advertising Manager, Clark Tructractor Co.*

INDUSTRIAL advertising is entering a new epoch. A few years ago technical advertising was embryonic, little more than puerile publicity. Then the pages of the trade magazines began to take life as strong business organizations sought to impress their personalities on the industrial consciousness.

Slowly, during the last two decades, well-developed industrial campaigns have appeared, as distinctive, effective and productive as the more highly spectacular campaigns appearing in the popular magazines of national circulation. The success of these outstanding campaigns intrigued other industrial leaders until now the advertising of the industrial manufacturer is as imaginative and as interesting as that found in any field of commercial activity.

Industrial advertising concerns itself primarily with the problems of moving materials from industry to industry or merchandising special services to the various industries. During recent years men in industry have had opportunity to observe the effectiveness of advertising as applied to their particular problems. They have seen small concerns grow large in the industrial world under the influence of sound merchandising plans energized by sane advertising.

Indeed, so successful have some individual companies been in their campaigns that now whole industries are entering upon cooperative advertising to hold old or develop new markets.

### Patron Saint of Advertising

Lord Dunsany is the little-known patron saint of advertising. He was born into the world to keep alive the imagination of men. I commend him to all creators of advertising. Imagination is the flame that sets the fire of desire burning in the prospect's heart and brain. Heap the altar of imagination with fagots of fact if you would give potency to your prayers. When we write of our product let us vision it as functioning in our prospect's plant, not crated in our warehouse but actually in service. To think is human, to imagine, to plan, to create is divine—preserve the creative instinct if you would maintain contact with success.

I am a disciple of the coupon. I believe in direct results. Rarely does an ad leave my desk without a coupon —the precious pass key to service and sales. I believe in a lot of theories, and sometimes woo and win the interest of our salesmen with some theory pertinent to sales —but, oh boy! you ought to see them enthuse over a live inquiry. Our treasurer is not much given to mirth, but even he has been known to smile upon receipt of a coupon bearing the signature of a well rated company.

During a directors' meeting several years ago when business was not so very good, we were canvassing the sales situation and I remarked that inquiries had fallen off almost to the vanishing point; a bad omen—both for business and for the ability of the advertising manager.

"Do you expect all of your advertising to bring direct returns?" asked an executive of Westinghouse Electric, who happens to be on our board.

"Yes," I replied. "I measure the value of the various media by the cost of inquiries and sales produced by our advertising in them."

"The larger part of your advertising appropriation," he replied, "should go into permanent values. Direct inquiries and sales are important but a large proportion of your advertising returns can never be traced because it goes to build public confidence which is public acceptance."

I have never used that remark as an alibi to explain paucity of returns, but it did burn its sagacious way into my soul so that ever since a positive quality of permanency has been built consciously into every advertisement put out by our companies.

*Permanent values can be built into a business structure by sane advertising,* permanent tangible values that can be transmuted into ledger values. "Only within comparative recent times have the advertising appropriations of industrial enterprises become of large permanent business importance," says Guy Emerson, vice-president of the National Bank of Commerce, New York. He throws around this salient remark a protective warning when he says, "The banker is coming to realize that public interest is not necessarily a permanent possession—it can be won only by skillful competition. To win a place in the crowded and besieged mind of the man is not equal to holding such a place. Not even the greatest corporation or the most popular product can hope to build up a reputation which will, of its own force, endure. The history of advertising is filled with striking proofs of human forgetfulness. The creation of permanent values carries, also, the responsibility of maintaining these values by continuous effort."

A. C. Robinson, president of the Peoples Savings and Trust Co., Pittsburgh, states, "The banker has also learned that good advertising is not wholly an expense, for in addition to the business which can be traced directly to it, it can be transmuted into that most precious asset—public confidence and good-will."

* An address delivered before the National Industrial Advertisers Association, Philadelphia, Pa., June 22.

What are some of the permanent values of industrial advertising that are worthy of appreciation? Primarily, "good-will," the public's favorable reaction to an industry's personality. The factors that enter into the creation of good-will are the same that underlie every individual sale; knowledge, comparison, appreciation. Our company advertises over a series of years that its products represent a standard of known quality. The public purchases our product, compares the quality of the individual purchase with our public claims and if it finds performance balancing with profession, a favorable impression has been made which repetition of the experience will make more permanent until the personality of the company becomes symbolic with a standard of quality. Thus are tangible values built up behind such magic words as "Duco," "Westinghouse," "Mazda," "Celotex," "Armco," "Portland Cement," "Timken," "Bullard," and "Link-Belt," and a long list of names equally symbolic.

### Value of Trade-Marks

A company's trade-mark is often the focal point of public good-will so that the intangible but permanent values of advertising are transmuted into the tangible and permanent values which adhere to trade-marks. But whether it be the name of the company, the distinctive character of its product, or its symbolic trade-mark, nevertheless its value represents the public's appreciation of a balance of values between claims and performance, and this is "good-will."

Industrial acceptance is difficult to obtain, but once achieved is comparatively easy to hold. The reasons are apparent. Industrial buyers, as a rule, are large and regular purchasers of required commodities. Sentiment has little influence, although a deal of loyalty influences purchases in this field—loyalty bred of service in time of stress. Spectacular, flamboyant advertising methods do not create permanent advertising values and it is debatable if they produce adequate direct returns to justify the expense involved.

Appeals to the masses go largely to untrained buyers. Appeals to industrial markets go to highly trained specialists. I call your attention to the changes that are taking place in the purchasing field; changes that have been rapid since the debacle of 1921, the year of the big inventory and the big flood of cancellations. Purchasing agents are becoming a part of management. Time was when they were highly trained librarians of catalogs and depositories of all sorts of buying information. Then up rose the trade directories, eliminating the need for filing cabinets filled with obsolete catalogs. The wise purchasing agent left his desk to ambitious subordinates and went out into his shop and other shops to discover the uses of various commodities. Thus, we see purchasing agents being vested with increasing authority and responsibility and becoming directors and officers of their companies. We recently made our purchasing agent vice-president in charge of purchases.

### Less Selling, More Buying

This makes for less selling and more buying in the industrial field than in any other realm of advertising. Gentlemen, we are not daunted but complimented by the difficulties of the task assigned us. Industrial buyers are hard to shift to new sources of supply. Once we win our market, quality and service will hold it for us. Industrial markets are, therefore, more permanent than other markets. Industrial advertising must ever seek to establish permanent values.

How may this desideratum be obtained? By building our advertising on an economic principle. Only as our commodity or service has an economic right "to a place in the sun" does it deserve to prosper and endure. This is basic. It is also profitable. We have tested it in the market place. It pays in direct returns and cumulative values. Sell a man by weight, measure, or price and you put your product in competition with all similar commodities, leaving to the buyer only the determination of quality. Base your appeal upon an economic principle and you justify the old and tested advertising maxim, "The appreciation of quality will remain long after the memory of price has been forgotten." Economic principles cannot be evaluated in terms of dollars and cents, but purchases based on economic principles can be justified in terms of human progress and material profits.

What value should be placed upon the good-will plowed into a company's business by constructive advertising? It is not difficult to make such appraisals where the securities of the companies are dealt with on the exchange. It is found in the difference between the book value of the securities and their quoted values on the exchange. Here again a significant fact comes to light. The securities of industrial companies conducting large advertising campaigns find a fuller and freer market than do those who hide their identity behind a screen of advertising silence. Many securities of substantial industrial companies quoted on the New York exchange would be greatly enhanced in price if those companies would merchandise their commodities or services with the aid of constructive advertising campaigns.

Constructive advertising produces permanent, tangible values and industry should be quicker to appreciate these values than the investing public.

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AN anti-knock preparation which is claimed to be only slightly poisonous has been developed by the Badische Anilin und Soda Fabrik in Germany, the same firm which some years ago developed synthetic wood alcohol. It is known as Motyl and is added to gasoline in the proportion of 0.4 per cent by volume. Motyl gives gasoline a yellowish color and the treated gasoline is sold under the name of Motalin. Motyl consists of iron nona-carbonyl, $Fe(CO)_9$, dissolved in an equal quantity of gasoline. Iron nona-carbonyl is a combustible liquid having a boiling point of 220 deg. Fahr. and a specific gravity of 1.5

Since Motalin contains about 0.56 per cent metallic iron, equivalent to 0.8 per cent iron oxide, the question is what becomes of this iron or iron oxide. Most of it is undoubtedly blown out with the exhaust as fine dust. Some will be deposited on the combustion chamber wall and the inner end of the spark plug, forming a reddish coating.

This, however, is said to be very soft and not to attain any great depth. Some of the iron oxide gets into the lubricating oil and gives it a reddish tint. Microscopic examinations are said to have shown that this oxide is very finely divided and it is claimed that it has lubricating value the same as colloidal graphite. The above information on the new product is taken from an article on the subject by Wa. Ostwald in *Auto-Technik*.

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THE Milburn paint spray, a recent product of the Alexander Milburn Co., 1416 W. Baltimore St., Baltimore, can be regulated by a turn of the nozzle to give a small or large spray or to shut off the paint completely for dusting purposes. It is said to give complete atomization of the paint, which results in uniform coverage of the surface with the use of a minimum amount of paint. Recommended air pressure is 40 lb. but this can be varied to suit the work. Carbonic gas tanks can also be used with good results.

# Books for the Business Bookshelf

## *Use of Salesmen in Marketing*

Salesmen in Marketing Strategy. Leverett S. Lyon. The Macmillan Co., New York, 422 pp. Illus.

THIS book is entirely devoted to the uses of salesmen in marketing. It discusses the various problems which may arise in connection with the organization and operation of a sales force and treats the whole subject of selling from a personnel point of view. Much of the material is in the form of so-called case material taken from the records of many different concerns.

The book is divided into five parts which take up the salesman instrument or the kinds and uses of salesmen; the preparation of a sales force including means of recruiting and training methods; planning the operations of a sales force; and actually operating it.

Based upon a course of study, the work may possibly be of more value as a text book for college students or embryo sales managers than as a practical working tool for active sales executives but the latter should obtain considerable worth-while information from it.

## *Chemistry in Industry*

Chemistry in Industry. Two Volumes. Edited by H. E. Howe. The Chemical Foundation, Inc., New York. Illus. Vol. 1, 372 pp.; Vol. 2, 392 pp. $1 per vol.

NO matter how many times he has heard it before, it rarely fails to intrigue the layman to hear again the innumerable ways in which his comfort and well-being are dependent upon the work of chemists. Chemistry deals with the changes of matter and its characteristics and properties so that there is no line of human endeavor in which its influence can not be traced and no substance used by man in which chemists are not interested.

Although these two volumes by no means cover the entire field of chemical applications they most surely do increase the respect of the layman for chemists and their work. The books have been written in a popular vein which makes them easy to read by one not particularly familiar with chemistry, but they are still the work of a number of specialists so that popular writing has not been gained at the expense of accuracy.

Applications of chemistry in some 40 industries are given. Chapters of particular interest to the automotive industry discuss the relations of chemistry to alcohol and other solvents; iron and steel manufacture; leather manufacture; non-ferrous metallurgy; the petroleum industry; the rubber industry; lubricants; paints, varnishes and colors; rust resisting metals; etc.

## *How to Control Inventory*

Economic Control of Inventory. Joseph H. Barber. Codex Book Co., New York. 114 pp. Illus.

THE present tendency throughout nearly all branches of industry to extend back toward the producer the burden of carrying reserves of finished goods is making it still more necessary than it has been in the past that manufacturers have complete and effective control over their inventories—both of finished goods and raw materials.

This book offers a practical example of how one manufacturer has attempted to apply scientific methods to inventory control and, by forecasting orders and future production, to keep at a minimum his investment in materials—raw, finished and in process—but at the same time meet the requirements for quick deliveries imposed by his customers.

The methods used seem to be rather complicated and possibly would not be economically applicable to an industry in which stock control was not of utmost importance. For such concerns, however, the example presented here—much of it in a form which can be readily applied to other industries—should be of considerable help in securing better inventory control.

## *Natural Gas and Gasoline*

The Recovery of Gasoline from Natural Gas. George A. Burrell. The Chemical Catalog Co., New York. 600 pp. Illus.

THE natural gasoline industry actually produces about seven per cent of the gasoline used in this country and, by making it more volatile, makes available for motor car use a larger amount of non-volatile refinery gasoline, probably equivalent to about 17 per cent of the country's consumption. In this book Mr. Burrell traces the history of the natural gasoline industry and presents the theories underlying the practice of the industry as well as current and past practice. Because the equipment used in the plants are so closely connected with their construction and operation the book also includes discussion of various items of equipment such as heat exchangers, gas engines, boilers, water cooling systems, etc.

The general subjects under which the natural gasoline industry are discussed are: history, testing, processes, engineering features, depletion and a discussion of motor fuels other than gasoline into the composition of which natural gasoline enters.

## *Reducing Cost of Accidents*

AS a general rule, if the accident rate is high and a plant contains no doctor, nurse or dispensary, a considerable reduction in the cost of accidents can be obtained by the installation of a first aid station in charge of a well-trained nurse. This is the statement made by the Policy Holders Service Bureau, Metropolitan Life Insurance Company, in a booklet called "First Aid Rooms in Small Plants." The booklet contains a description of how such a station might be set up and conducted with information concerning necessary equipment and records.

## *Overseas Market Data*

TO manufacturers who are contemplating extending their markets to include Australia and New Zealand, a little pamphlet recently published by Sample & Wilson Pty., Ltd., 452-60 Fliders St., Melbourne, Victoria, should prove of considerable help. The publishers, a manufacturers' selling organization, have included in the booklet general and specific information about these overseas markets which, from their experience, has been of most value in determining sales policies.

# EDITORIAL

## *Educating the Public on Used Car Values*

INFORM the public and keep on educating the dealer.

That's the way a good many executives today say they are expecting to alleviate the difficulties involved in the used car problem. The latter process has been going on for some time, but needs to be accelerated. The former has been tried only to a limited extent thus far.

How can it be done?

A group of Canadian dealers along the border are doing it by advertising in the newspapers on the 15th of every month the fair value of each make and model of every standard car fully reconditioned for resale which has been put on the market since 1920. In some ways their plan is just another used car plan. But it has the special feature of providing a definite and general means of notifying the public at large what to expect in the way of used car values.

A man rarely squabbles with the dealer over the price of a new car He knows what the new car costs before he ever goes near the salesroom and he already has his mind more or less adjusted to accepting the price. In trading in or buying a used car his mind today is ready for bartering and bickering. He feels—and justly in many cases—that he may get much or little.

It is the belief of more than one automotive executive that advertising and broadcasting of standard used car values in local communities would gradually affect public psychology so that the idea of barter would be minimized in used car transactions just as in new car transactions.

The used car plans which have failed usually have done so because some few dealers refused to abide by the rules of the game. They couldn't be forced to play ball; probably they never can be forced. But any plan or idea with the full power of the industry's opinion and publicity behind it would be likely to get acceptance finally from practically every retailer. He might successfully refuse cooperation with a trade association agreement, but he would find it very difficult to refuse cooperation with a constructive movement favored by most of his fellow dealers and the manufacturers and understood by the public at large.

## *Paying Indirect Workers*

THE necessity for relating wage payments to production performance as directly as possible becomes more evident to production men every year. Most automotive plants today are using some form of incentive plan of wage payment for those workers whose jobs are readily adapted to piece work or bonus applications.

But in every plant there are a large number of workers whose efforts are reflected only indirectly in output counts at the end of the day. Tool makers, die makers, sweepers, inspectors, foremen and numerous other employees who contribute an essential service to the producing machine cannot have their efforts checked in the sense that machine workers can.

Can't some form of incentive wage payment plan be worked out for this class of workers? If so, is such action desirable?

The answer to the latter question almost certainly is "Yes." Most automotive production men agree on that. But only in a few factories, apparently, has any successful working out of an incentive plan for these indirect workers been accomplished. Paige-Detroit, Chandler, and Chrysler are among those who have such plans operating. Possible means of adapting some such plan to other automotive plants seems to offer a good field for further study. The difficulties involved in the problem make its further investigation particularly desirable.

## *Instalment Selling Abroad*

WITH the word coming from a number of overseas markets that business may be a little harder to get in the future than in the past few years, comes also the announcement of the formation of an overseas automobile retail financial group by the Commercial Credit Trust Co. of New York and reports of further extension of various instalment buying plans all over the world.

General Motors Export Corp., of course, already has done extensive work in financing foreign sales, while instalment buying has reached considerable proportion in a number of countries. Four automobile banks have been organized in Germany to assist in selling motor cars; from 30 to 50 per cent of sales in Czechoslovakia today are said to involve some deferred payment; from 60 to 75 per cent of Danish sales now are on a time basis; the proportion in Finland is about 50 per cent, time selling being handled by the banks. Finance companies have been organized in Australia, Holland, Great Britain and many other nations.

Instalment selling already seems to have become an integral part of overseas selling. American experiences should help to prevent abuses from creeping into foreign sales practice, and at the same time aid in developing this useful sales adjunct along lines which are mutually advantageous to the buyer and to the seller.

AUTOMOTIVE NEWS SECTION INDUSTRIES

*Philadelphia, Pennsylvania*

*Thursday, July 15, 1926*

# New Model Output Increases, Fall Market Outlook Steady

PHILADELPHIA, July 15—Several companies that have been on a materially reduced production basis because of model changes are already beginning to advance the rate of output, but as a whole the industry is on the regular early summer schedule of 20 to 30 per cent under the peak rate of the spring. It is too early to say whether the late summer market will show the normal upturn, but all signs point to a major degree of confidence in the outlook on the part of the big producers.

Perhaps the outstanding feature of the period is the absence of price-cutting, which began to be general about this time last year. The producers are evidently of the opinion that the market is still good enough to support a high output rate without the stimulus of price reductions, which could be established without serious embarrassment by several of the strongest factors in the field. An important new model was announced last week with prices unchanged, and this was taken as evidence of the stability of the price situation.

In the new cars a continuation of the trend toward bright colors and low body lines is observed, while the mechanical changes, so far as can be determined this early in the year, are in the direction of smoothness of operation and elimination of noise and vibration. But basically, unless some companies introduce unforeseen innovations, the changes, this year are likely to be less radical than ever before.

The avoidance of costly redesigning of models is contributing to the prosperity of the companies, most of which have been able to establish economical production in accordance with the continuance of a standard design. Material costs are still declining and are well below the level of a year ago at this time.

Truck and bus sales and production are generally following the trend in passenger cars. On the other hand, exports of both passenger and commercial vehicles are continuing to expand.

## G.M.C. June Retail Sales 54% Higher Than in 1925

NEW YORK, July 15—June retail sales of the General Motors Corp. fell below the April and May figures of this year but were 54 per cent better than a year ago.

The total number of cars and trucks sold by dealers to users during June was 117,176, compared with 141,651 in May and 136,643 in April. Divisions' sales to dealers reached 111,380 a drop from the 120,979 in May and the 122,742 in April.

For the first six months of this year dealers' sales have amounted to 620,190, whereas for the same period last year they registered 396,360 and 380,308 in 1924. Divisions' sales so far total 636,087, compared with 389,209 for 1925 and 353,099 in 1924.

## Would Have Wilson Direct New Murray

### Reorganization Plan Calls for New Company With Single Stock Issue

DETROIT, July 15—A new plan of reorganization of Murray Body Corp. to which the merchandise creditors committee and large holders of preferred and common stock of the company have already assented, calls for the formation of a new company of which W. R. Wilson, former president of Maxwell Motor Corp. would be chairman of the board. Mr. Wilson is now president of the Guardian Trust Co., receiver for Murray. He would not relinquish his banking connection to take the new company chairmanship, but would obtain the new operating personnel.

Under the plan of organization, the new company would assume the first mortgage 6½ per cent, ten-year bonds. Holders of bank indebtedness would receive 25 per cent of their claims in cash and 75 per cent in common stock of the new company at $45 per share.

Holders of merchandise and other indebtedness would be paid similarly to bank creditors except that holders of claims of less than $1000 may at their option receive in full for their claims 80 per cent in cash.

Holders of existing 8 per cent cumulative preferred will have the option of (1) paying $35 per share for each share of their old preferred and receiving two shares of new company common stock for each share of the old preferred, or (2) making no cash payment and receiving three-fourths share of new company common for each share of old preferred.

Holders of common are to have the option of (1) paying $10 for each share of old stock and receiving new company common at the rate of one-half share for each share of old, or (2) making no cash payment and receiving one-fifteenth share of new company common for each share of old.

The new company is to have one class of stock of about 290,000 no par shares. It would then begin operations with a simple capital structure consisting only of the present bond issue, of which $3,750,000, it is estimated, will be outstanding, and the new issue of stock.

## Technology Institute to be Built by G.M.

FLINT, July 14—General Motors Corp. will establish a technical college in Flint to be known as the General Motors Institute of Technology. The college will be located on a ten-acre campus near the Chevrolet Motor Co. and will offer educational facilities for 2000 students in day and night classes, according to H. H. Bassett, president and general manager of the Buick Motor Co., who announced the plans.

The institute will take over the Flint Institute of Technology which has been operated for seven years by the Industrial Mutual Association, but still will be affiliated with the association whose membership is made up of thousands of Flint factory employees. Major Albert Soberly, director of the Flint Institute, will be in charge of the new General Motors College.

## Cadillac Promotes Lewis

DETROIT, July 15—W. W. Lewis, advertising manager of Cadillac Motor Car Co., has been promoted to the position of assistant general sales manager and director of advertising. Mr. Lewis joined Cadillac as district sales manager in August, 1922, and became advertising manager in November, 1923, on the promotion of Verne E. Burnett to direction of General Motors Institutional advertising.

## Pierce Arrow Gains 26%

BUFFALO, July 10—Sales of Pierce-Arrow Motor Car Co. for June showed an increase of 47 per cent over June, 1925. Sales of trucks and buses also continued to show increase over 1925 figures. Total shipments in the first six months of the year were 26 per cent higher than in the 1925 first half.

## Gardner Gains 34% in Half

ST. LOUIS, July 13—Sales of Gardner cars in June showed an increase of 10 per cent over May, and brought the total gain for the first six months of the year to 34 per cent over 1925. Net earnings during June were a new high.

# "Big Tim" Would Czar Tire Distribution

## Chicago Union Boss Tries Hand at Association—Dealers Oppose

CHICAGO, July 15—An attempt to organize tire dealers along union lines is disclosed by the action taken by the Chicago Tire Dealers Association to depose T. D. "Big Tim" Murphy from his self-selection as president of the association.

According to the plans of organization as announced here by Murphy since his requisitioning of the job, the Chicago tire association will be the basic unit of a widespread union that would take in all battery stations, garages, automobile repair shops and accessory dealers.

He is quoted as saying:

"When we get all these fellows in we can make anybody come across. Tire makers won't be able to dictate to dealers any more. Dealers will dictate to tire manufacturers."

Attempts to organize similar associations in other businesses, mainly by intimidation, are now being dealt with by the Chicago police authorities. These were mainly among small shop-keepers who were threatened with outrages, some of which happened, if they didn't come in. Some 50 or more such organizers are now under indictment.

Murphy was formerly organizer and czar of several Chicago labor unions. He recently was released from Leavenworth penitentiary where he served a term following conviction for participation in a mail-robbery.

# Rounded Body Lines Feature Essex Coach

DETROIT, July 15—A new Essex coach which lists at $795 is now being displayed. The all-steel body is of the same general size as the previous model but curved lines take the place of the familiar square corners and with the nickel-plated radiator the car's appearance is greatly improved. While the same upholstery is used as heretofore the finish is now black enamel with bright striping around the body belt and on the wheel spokes. Crank window lifts for both front and rear windows and interior door handles mounted several inches below the door windows take the place of the former interior equipment. Standard equipment includes bumper, Motometer, and windshield cleaner.

## Standard Has New Lubricant

NEW YORK, July 14—An oilier oil embodying entirely new principles of lubrication has been developed by the Standard Oil Co. (New Jersey). According to W. C. Teagle, president, the new product solves the problem of spotty lubrication. The new oil will be known as "Standard" motor oil and will displace Polarine. It will be placed on sale July 15 in the marketing field of the New Jersey company. The new oil has been three years under development and for the past year has been given thorough trial in the company's own fleet of motor vehicles.

# Flint Stockholders Approve Plant Sale

FLINT, July 15—Stockholders of Flint Motor Co. today voted approval of the sale of the factory buildings here. The property will be taken over by General Motors Corp. under a sales agreement previously reached. Though no official statement has been made by the corporation it is regarded as certain that the factories will be transformed into body building units of Fisher Body Co., making all Buick closed bodies.

## Flint to be Transferred to Elizabeth Factories

NEW YORK, July 15—Production of Flint cars will be transferred to the Elizabeth plant of Durant Motor Co. of New Jersey beginning with Sept. 1, according to a statement issued at the Durant Motors, Inc., offices here. All models of the present line are to be continued.

Sales policies of the Flint Motor Co. will come under the direction of Colin Campbell, vice-president of the Durant organization, who is also directing the policy of Star Motors, Inc.

## Change Ajax Nameplates to Maintain Valuations

DETROIT, July 15—Owners of Ajax cars are being transferred to owners of Light Nash cars by the simple expedient of applying the new nameplates and hub caps which have been supplied by the factory for this purpose. Nash dealers throughout the country have been advised by the factory to get in touch with Ajax owners and make the change in plates and caps where desired. The purpose of the change is to prevent owners suffering from a depreciation that might arise because of the change in name.

In states where certificate of title laws apply, or laws which identify a car specifically by name, the change is being made by first complying with necessary State requirements. In Michigan the certificate of title is first amended and the change in nameplate then made. Car dealers with used Ajax cars in stock have been advised to take title to these cars in the new name and then apply to Nash dealers for the new nameplates if they desire to sell the car under its new name.

## Star Shows 27% Increase

NEW YORK, July 14—Colin Campbell, vice-president, Durant Motors, Inc., reports that for the six months ended June 30, there were 70,433 Star cars produced and sold as against 55,263 in the same period a year ago, an increase of 27 per cent.

# *Business in Brief*

***Written exclusively for* AUTOMOTIVE INDUSTRIES *by the Guaranty Trust Co., second largest bank in America.***

NEW YORK, July 15—Trade at retail and wholesale was somewhat reduced last week by the holiday, but was apparently at least as active as a year ago. The level of commodity prices rose slightly. Stock prices continued to advance. Increased firmness in money rates developed in the latter part of the week.

The official crop report based on condition July 1 estimates the "composite condition" of the major crops to be 6.4 per cent below the average for the last ten years. The corn crop is forecast at 2,660,780,000 bushels, as against 2,901,000,000 bushels last year; winter wheat at 567,762,000 bushels, as against 398,500,000 bushels; spring wheat at 199,595,000 bushels, as against 270,900,000 bushels.

### BUILDING CONTRACTS

Building and engineering contracts awarded last month in 37 states, according to the F. W. Dodge Corp., had a value of $547,792,400 which is about 1 per cent smaller than the May total and 2 per cent below that for June last year.

### CAR LOADINGS

Car loadings in the week ended June 26 numbered 1,062,252, showing increases of 18,532 over the total for the preceding week and 60,079 over that of a year ago. Loadings for the year to date number 25,036,464, as against 24,328,490 a year ago and 23,185,152 two years ago.

### BANK DEBITS

Bank debits to individual accounts reported to the Federal Reserve Board for the week ended July 7 (a holiday week) were 2.2 per cent below the total for the preceding week but 10.7 per cent above that for the corresponding period last year.

### FISHER'S INDEX

Fisher's index of wholesale commodity prices stood at 150.8 last week, as against 150.2 a week earlier and 153.6 four weeks earlier.

### FEDERAL RESERVE STATEMENT

Bills and securities held by the Federal Reserve banks increased $75,100,000 during the week ended July 7, a gain of $97,500,000 in discounts being partially offset by declines of $11,800,000 in open market purchases and $10,000,000 in Government securities. Note circulation rose $40,200,000 and deposits $19,300,000, while reserves decreased $37,600,000. The reserve ratio declined from 75.3 to 73.2 per cent.

Loans of reporting member banks during the same period declined $77,000,000, investments $28,000,000 and net demand deposits $240,000,000, while borrowings from the Federal Reserve banks increased $100,000,000.

The call loan rate stood at 4½ per cent throughout last week, as against 4¼ to 5 per cent a week earlier.

# Price Cuts Revive Retail Tire Trade

## Orders at Factories Indicate Increasing Volume—Production Rate 115,000 Daily

AKRON, July 12—Although it is still too early to perceive the full effects of the sweeping tire price reductions which went into effect July 6, sales managers at Akron plants say the retail tire business has been greatly stimulated, and orders are being received in increasing volume from all over the country.

When the factories resumed operations after a ten days' period of curtailment for inventory and the Independence Day holiday, production was at the rate of approximately 115,000 tires a day, compared with a rate of 100,000 tires in June and 85,000 in April and May, which represented the low point of operations for the year. Daily output is to be raised by about 5000 tires next week, it is reported.

The larger tire manufacturers, which had rather large inventories on hand, are feeling the effects of the price cut more than their smaller competitors, it seems. The latter were already selling almost as many tires as they could produce, and did not desire a reduction at this time. Companies like Goodyear, Goodrich, United States, Fisk and others, however, were anxious to move surplus stocks and increase production and the only way to do so apparently was to cut prices.

With tire prices back to late 1924 and early 1925 levels and hot weather at hand, it is felt that sales within the next two or three months will be the largest in the history of the industry. Dealers' stocks are low and need replenishing.

Some Akron authorities predict there will be an actual shortage of tires later in the year unless production is substantially increased.

## Hupp Sees Higher Totals in Final Half-Year Sales

DETROIT, July 8—During the first half of the year, Hupp Motor Car Corp. shipped 26,943 cars breaking all previous sales records. Both first and second quarters were largest in history period. Shipments exceeded first half of 1925 by 39 per cent and first half of 1924 by 64 per cent. Retail sales by distributors and dealers showed a gain of 45 per cent to 50 per cent, it is estimated.

"Hupmobile expects to finish the year with an even larger gain than it registered during the first six months," declared C. D. Hastings, president. "July should virtually duplicate the record made in June. Every indication is for a continuance of splendid business for our distributors and dealers throughout the country the rest of the year. We expect that close to 40,000 six-cylinder cars and more than 18,000 "eights" will be sold during 1926."

### 400,000*th* STAR CAR MARKS EXPANSION

**NEW YORK, July 9—Durant Motors, Inc., completed and shipped Star car number 400,000, a sport-six roadster, at the Elizabeth plant on June 28. The company reports that each month of 1926 has shown an increase of sales of Star cars over the corresponding month a year ago, and that the increase for the first five months this year was 32 per cent.**

**The dealer organization has also shown a growth during 1926.**

# Buick in 11 Months Shows 226,583 Output

FLINT, July 8—The Buick Motor Co. has broken all its previous sales records, figures released by the factory, today, indicate.

During the first 11 months of the fiscal year, to July 1, deliveries totaled 226,583 cars, exceeding by 66,584 cars the same period a year ago, or a gain of 41.5 per cent. It is 55,534 greater than the best previous entire fiscal year.

The first six months of 1926 saw 131,427 new Buicks sold, or 25,729 greater than the best previous mark established in 1923. Deliveries in the first six months of 1925 were 93,835, leaving a difference in favor of the 1926 period of 37,592 cars.

June also set a new record with 21,401 cars sold. The best previous June was in 1923, when 20,163 units were delivered to purchasers.

## Chevrolet June Output Reaches High of 77,241

DETROIT, July 10—The Chevrolet Motor Co., in June, broke all of its monthly production records when it made 77,241 passenger cars and trucks. Production for the first half of the year aggregated 384,573 units, compared with 249,834 for the same period in 1925.

April and May saw Chevrolet establish successive production totals of 71,157 and 74,617, respectively. The new June record exceeds May by 2624 and is 22,295 greater than June of a year ago.

### Again Leads in Spokane

SPOKANE, WASH., July 12—Chevrolet nosed Ford out by eight cars for leadership in Spokane county during June, registration figures compiled by the Washington Automotive Trade Association show. Chevrolet registrations were 87 and Ford 80, total passenger car registrations (new car) having been 516 during the month.

Ford led used car registrations with 271 out of 617. New truck registrations were 39 and used truck registrations were 62. Sales were somewhat smaller than during the earlier spring months but ahead of a year ago.

# Rubber Restriction Aid to Speculators

## Firestone Back From Near East Trip Outlines Views on Situation

AKRON, July 12—"Speculators, instead of the growers, get the big profits when the price of rubber is pushed to exorbitant levels through unwarranted restriction," declared Harvey S. Firestone, Jr., of the Firestone Tire & Rubber Co., on his return to Akron after a six months' trip through the Far East.

"Most of the plantation owners would like to see rubber prices remain at present levels around 42 cents a pound or a little higher. When rubber was selling above $1 a pound last year, they actually obtained little more than 50 cents a pound for their product.

"The evil effects of extortionate rubber prices in crippling the rubber manufacturing industry, both in this country and abroad, has apparently had its effect. Even at present prices there is a big profit in growing rubber."

Mr. Firestone sailed last January for Japan. His itinerary took him through Japan, China, the Philippines, the Malay Peninsula, Java, Sumatra and Borneo.

Although he did not visit Liberia, Mr. Firestone said the Firestone rubber growing project there is proceeding satisfactorily. The company has 1,000,000 acres of land under lease in that country, besides a small plantation in operation.

At Singapore he said improvements are being made to the company's washing and refining plant, which is being expanded to about twice its present size.

Regarding the possibility of Americans growing rubber on a large scale in the Philippines, he declared this is possible, provided economic and political conditions are made favorable.

Information gathered on the trip will be valuable in working out plans for future rubber growing activities, he stated.

## Makes Nash Body Parts

PINE BLUFF, ARK., July 10—Purchase of a mill site in Dumas, Ark., together with more than $1,000,000 worth of hardwood timber land nearby, and the signing of a contract by the Stimson Veneer & Lumber Co., of Memphis, to furnish wood for the Season-Dunning Body Co. in Pine Bluff, was announced here. The Season-Dunning body plant was opened in Pine Bluff recently for the manufacture of body parts for Nash motor cars.

## Car Textile Plant Active

YOUNGSTOWN, July 12—The Mosier plant at Youngstown of the Standard Textile Products Co., producing textiles and coverings used principally in the automobile trade, has been operating at 97 per cent for the past five weeks, reflecting the activity in new business.

# Expect America in World Car Bureau

## Paris Report Declares N.A.C.C. Ready to Take Place on Special Basis

PARIS, July 3 (*By Mail*)—Negotiations are in an advanced condition, it is stated here, for the American automobile industry to take its place in the international association of automobile manufacturers known as the "Bureau Permanent des Constructeurs d'Automobiles." As the result of negotiations opened by C. C. Hanch, in 1919, a preliminary understanding was arrived at between the National Automobile Chamber of Commerce and the Bureau Permanent, but difficulties developing later, the N. A. C. C. never officially applied for membership.

Most of these difficulties have been removed and when the Bureau Permanent holds its next meeting in October it is expected that an American delegate will be present in an official capacity. It is understood that instead of the American industry being asked to pay 25 centimes (French) per worker employed, the annual dues would be limited to an amount equal to that paid by the two most important European automobile-producing countries, which at present are France and England. It is believed that foreign automobile manufacturers will be admitted to the national shows in New York and Chicago and, according to Henri Cezanne, Paris show manager, American participation in the Bureau Permanent could be expected to open the way to better treatment of American exhibitors in the French show.

Participation of the N. A. C. C. in the Bureau Permanent should make it possible for American motorists to secure the advantages of the triptyque system now in existence among all European countries. Contrary to the general belief, this is not dependent on a Federal automobile law but is based on Federal import duties. American trade interests in Europe are all convinced that it would be of value to them if privately owned American automobiles could be brought into Europe without the present cumbersome formalities rendered necessary by the exclusion of the United States from the triptyque agreement.

## Kempsmith Ships Abroad

MILWAUKEE, July 10—While its general business so far this year is far above that of a year ago, one of the features of the demand for milling machines experienced by the Kempsmith Mfg. Co. is the number of orders from foreign countries. Recently shipments were made to Australia and South Africa. An order has now been received from an interest in Chile for a Kempsmith Maximiller of the largest size ever built. It weighs 13,000 lbs.

### *SALT LAKE RULES TEST RUNS "OUT"*

**SALT LAKE CITY, July 10—Hereafter automobile manufacturers conducting intercity speed tests will not have the co-operation of the Salt Lake City Board of Commissioners. On motion of the Commissioner for Public Safety, the Board has voted to treat drivers of cars in these tests as ordinary speeders. The Public Safety Commissioner, Mr. Burton, said these tests were a great source of danger to pedestrians and other motorists and that in the event of a claim for damages arising out of them, the Board of Commissioners would doubtless be liable inasmuch as they were conducted with their approval and with their cooperation. Until now those engaged in making these speed tests have had an escort whilst passing through the city in the form of a motorcycle patrolman.**

# Stutz Adopts Fedco, Adds Two New Cars

INDIANAPOLIS, July 15—A seven-passenger sedan and a seven-passenger sedan-limousine, both mounted on a 145 in. wheelbase chassis are announced by the Stutz Motor Car Co. of America, Inc. The former is priced at $3685 and the latter at $3785. The distinguishing Stutz ventilators are on the doors of both models and safety glass is used throughout.

The front compartment of the sedan-limousine is upholstered in leather and standard equipment of both models includes dictaphone, clock in the center partition, automatic step lights, curtains on all rear windows, corner reading lights, vanity case and smoking set. All engines are now fitted with 1⅛ in. longer valve stem guides and the valve piston has been lengthened 9/32 in.

The new models carry a new muffler for the main exhaust pipe and a muffler for the heater exhaust pipe. Announcement is also made that the Fedco theft detection numbering system has been adopted.

## Stearns Increases Capital

CLEVELAND, July 12—The F. B. Stearns Co. will issue 100,000 shares of $10 par 7 per cent cumulative convertible preferred stock and will increase the present authorized common from 260,000 to 360,000 shares. A meeting will be called for Aug. 11 to vote on the proposal.

The common stock will be carried in the treasury to take care of the conversion privilege. This program is done to strengthen the capital structure and to provide for expansion that has already taken place as well as to meet other plans for the future.

# Farm Survey Shows Improved Earnings

## U. S. Reports Receipts and Cash Balances as Exceeding Past Three Years

WASHINGTON, July 15—Further improvement in the financial condition of farmers in 1925 over the preceding three years is shown by the annual survey of farm returns released this week by the Department of Agriculture. Reports from 15,330 farmers in all parts of the country show an average net return of $1297 for those farms. The average size of the farms was 304 acres, with an average investment of $17,149.

Average gross receipts were $2551, consisting of $933 from crop sales, $897 from sales of livestock, $585 from sales of livestock products, and $76 from miscellaneous products. Average current cash expenses totaled $1477, consisting of $386 for hired labor, $242 for livestock bought, $244 for feed bought, $69 for fertilizer, $47 for seed, $191 for taxes, $119 for new machinery and tools, and $179 for miscellaneous items.

Receipts less cash expenses averaged $1074, in addition to which the farmer used home-grown food products valued at an average of $283. The value of fuel and house rent was not reported. On the other hand, no allowance has been made in the expense items for the labor of the farmer and his family which was estimated by the farmers at an average value of $793. The cash balance of $1074 represented all the cash the average farm made available to the owner-operator to pay his living expenses, take care of debts, and make improvements.

The farmers reported an increase of $223 in inventory values, which figure added to the cash balance of $1074 made a farm net return of $1297. Out of this amount $225 was paid as interest on indebtedness and $127 was spent for improvements.

The farm net return of $1297 for 1925 compares with $1205 for 15,103 farms in 1924; $1020 for 16,186 farms in 1923, and $917 for 6094 farms in 1922. Both receipts and expenses have increased.

## Tractor Demand Increases

PEORIA, ILL., July 10—The Caterpillar Tractor Co. has established three full-time shifts at the factory here with a force of 1450 to handle the file of orders now on hand which indicate capacity production the remainder of the year. The orders being received at the plant are interpreted by Caterpillar officials to show renewed activity in lumber, road building and farming interests.

## Gets 90% of Fageol Stock

CLEVELAND, July 12—More than 90 per cent of the stock of the Fageol Motors of Ohio has now been absorbed by the company organized by the American Car & Foundry Co.

# Men of the Industry and What They Are Doing

## G. W. Yeoman Resigns as Chairman of N.A.P.A.

G. W. Yeoman, who was largely responsible for the organization of the National Automotive Parts Association, and who served as its first president, has resigned as chairman of the board. When Mr. Yeoman retired as president of the association early in the year, he was named chairman of the board, in which position he has acted largely in an advisory capacity. The new officers are now well established in their work, he said, and for this reason he is giving up the post.

Previous to his connection with the N. A. P. A., Mr. Yeoman was connected with the Continental Motors Corp. for many years. He resigned as vice-president of the corporation to organize the N. A. P. A. The association is largely an outgrowth of the chain of service stations organized by Continental and other leading unit parts makers in which Mr. Yeoman had a leading part.

### Williams Resigns White Post

F. H. Williams, manager of the Philadelphia district of The White Co. for the last six years, has resigned. He is succeeded by A. W. Osborn, who was manager of the New York district for three years and until recently connected with regional vice-president, M. A. O'Mara, in New York. Mr. Williams was formerly a vice-president of the White Co., succeeding John J. Howley as manager of the Philadelphia territory. He was president of the Philadelphia Motor Truck Association for two years. As a mark of esteem Mr. Williams' organization recently surprised him by acting host at a big picnic and presenting him with a diamond ring.

### Lon Smith New Distributor

Lon R. Smith has joined the Armacoast Automobile Co., Indianapolis distributor of Studebaker Corp. with whom he will function as vice-president and director of sales. Until recently Mr. Smith was in charge of replacement lamp sales for the Edmunds & Jones Corp. and previously had been president of the Columbia Motor Car Co. Mr. Smith has been long identified with the automotive industry, particularly in the Indianapolis district.

### Bunch on Coast Trip

C. H. Bunch, chief electrical engineer of the Acme Electric & Mfg. Co., Cleveland, manufacturers of electrical equipment, is taking an extensive trip through the west and Pacific Coast territories to study business conditions and prospects.

### Jordan on Business Board

E. S. Jordan, president, Jordan Motor Car Co., has been made a director of the National Better Business Bureau.

### *DU PONT HONORED AS HORTICULTURIST*

**Pierre S. du Pont, chairman of the Board of General Motors Corp., has been notified that the George Roberts Horticultural Medal of Honor for 1925 has been awarded to him by the Massachusetts Horticultural Society. The committee making the award is headed by Professor Sargent of Harvard University. The medal is generally considered to be the most important horticultural award in America.**

**The notification to Mr. du Pont was written in a letter from Edward I. Farrington, secretary of the society, at the direction of the committee. In a recommendation of the committee it is said Mr. du Pont has established near the boundary line of Pennsylvania and Delaware the largest and most interesting garden under glass anywhere in the United States. The garden is open to the public and is visited every year by thousands of persons. It is felt that Mr. du Pont is doing an important service in horticulture in this way.**

### Wooler on British Trip

Ernest Wooler, chief engineer of the Timken Roller Bearing Co., sailed this week for England on the "Berengaria." While there he plans to investigate the development of anti-friction bearings in all industries and he will also visit the company's plant at Birmingham.

### White Joins Burd Ring

Frank M. White, sales manager of the Emerson-Brantingham Co. the last seven years, has been appointed sales manager for the Burd High Compression Ring Co. Mr. White is a former president of the American Society of Agricultural Engineers and was chairman of the sales managers division of the National Farm Equipment Association.

### Gerlach Advertising Head

A. J. Gerlach has been promoted to the position of advertising manager for the Kearney & Trecker Corp., Milwaukee, and Joseph Trecker has been appointed assistant advertising manager. Mr. Gerlach has been assistant to G. L. Erwin, Jr., sales manager of the company, in preparing advertising. Mr. Erwin will act as an advisor.

### Christley Holley Manager

H. E. Christley has been appointed district sales manager in charge of the Western district of the United States for Holley Carburetor Co.

## Wilkinson Service Head of Both Delco and Remy

R. L. Wilkinson has been appointed service manager of the Dayton Engineering Laboratories Co. Mr. Wilkinson will have charge of the Delco service department in addition to his duties as vice-president and sales manager of the Klaxon Co. and service manager of the Remy Electric Co. and will divide his time between Dayton and Anderson, Indiana, the home of the Remy and Klaxon companies. As head of both the Delco and Remy service departments, Mr. Wilkinson will have approximately 65 per cent of the total volume of all service on automotive electrical equipment under his direction.

### F. G. Jackson in Philadelphia

F. G. Jackson, direct factory representative of Kearney & Trecker Corp., Milwaukee, in the Philadelphia territory, will have headquarters in the new branch office opened in the Witherspoon Building, Philadelphia. George E. Gustafson, sales engineer, who has been looking after the interests of the company in Boston and Philadelphia territories, will move to Detroit early in September where he will make his headquarters with the C. A. Strelinger Co.

### Graham With New Haven

G. M. Graham has been appointed representative in the Detroit territory for the New Haven Clock Co. and will have headquarters in the General Motors Building. Mr. Graham is well known in the automotive engineering field, having been identified with the Briggs Detroiter, Chevrolet, and for the past four years has been service engineer with Durant Motors.

### R. S. Reeves With C. I. T.

Robert Starr Reeves left New York this week for Louisville where he will maintain headquarters as the Kentucky state representative of the Commercial Investment Trust.

He is the son of Alfred Reeves, general manager of the National Automobile Chamber of Commerce.

### Tenney Goes to Factory

George C. Tenney, manager of the Locomobile Co., of Boston, has just been promoted to a responsible executive position at the factory, and he left for Bridgeport to assume his new duties. He had just returned from a visit to California. George M. Dunham is now in full charge of the Boston agency.

### Marmoy With Canadian Firm

A. F. Marmoy has resigned as director of purchases of the Luxor Cab Mfg. Corp. to become manager of the Standard Metal Goods & Auto Parts Co., Ltd., of Toronto and Montreal. Mr. Marmoy was formerly with the Rolls-Royce Co.

# Congress to Press Truck-Bus Action

## Committee Chairman Points Out Eventual Regulation Need—McChord to Aid Industry

WASHINGTON, July 14—Regulation of interstate motor bus and truck traffic is to be taken up at next session of Congress, it was announced here this week by Representative James S. Parker, Chairman of the House Committee on Interstate Commerce. Similar legislation was defeated at the last session of Congress, after Senate bill No. 3894 had been favorably reported out of the Senate Committee on Interstate and passed the Senate only to "die on the table" in the House Interstate Committee.

Chairman Parker in discussing plans to open up the whole subject of general regulations of interstate motor bus traffic, stated that the bills introduced on this subject in the last session would again be introduced and the best features of each measure embodied in the new bill. Bills were introduced by Senator Cummins (S. 1734); Senator Reed (Rep.) of Penna. (S. 3894); and Rep. Bacharach (Rep.) (House Bill No. 11,055).

"Everybody that is conversant with the motor bus and truck industry realizes that sooner or later Congress must adopt a general policy for the regulation of public motor traffic crossing State lines. The problem is a serious one and is growing more acute every year. Congress will have to ultimately face its responsibilities insofar as the Interstate traffic is concerned and the House Committee on Interstate Commerce will take up the subject of hearings on a constitutional bill at the December session of Congress," Chairman Parker declared.

### Must Reconcile Differences

"Such legislation must protect the rights of the public engaged in interstate travel, safeguard the proper functions of the States and have due regard to all property rights and functions of the business of motor transportation. There are now wide differences and interests will be difficult to reconcile. There are questions involved of what classes of vehicles should be included in the regulatory powers of any interstate commerce tribunal; of non-interference by Congress with the rights of the State functions; jurisdictions, and a host of other problems which must be settled."

Simultaneous with the announcement by Chairman Parker of the plan to go ahead with interstate regulation, it was announced by the Washington office of the National Automobile Chamber of Commerce that C. C. McChord, formerly a member of the Interstate Commerce Commission, has been retained by the motor truck and bus industry to represent it before the I.C.C. hearings which begin on July 27 at Chicago.

In order that the Commission might have before it both sides of the "picture," a questionnaire has been submitted to that body, with a mailing list of 7400 of the nation's largest truck users, with a request that the Commission send these questionnaires out and secure data from the truck operators viewpoint. No decision has as yet been announced as to whether or not the questionnaires will be sent out. Should they not, however, plans are being made to have representatives of the biggest truck users, appear in person before the Commission with data on the subject.

# Motor Vehicle Code Before American Bar

DENVER, July 15—Approval of the American Bar Association will be sought at its convention here this week, of a recommendation by its national committee on uniform State laws for a uniform motor vehicle code for all states. If the action of the convention is favorable, the recommendation will be presented to all State legislatures for action at coming sessions.

The purpose of the recommended motor vehicle code is to eliminate divergences existing between the codes of the various states so far as this is practicable. In general the provisions of the recommendation follow those adopted at the recent meeting in Washington for the governing of motor vehicle operation, the licensing of vehicles and operators, and the issuance of certificates of title.

## Twelve States to Take Highway Safety Action

WASHINGTON, July 14—Plans are being formulated here for the holding of 12 state conferences on highway safety during the summer and fall, Secretary of Commerce Hoover has announced. The sectional conferences are expected to be instrumental in distributing to the public plans for preventing the loss of lives in automobile accidents, developed at the National Highway Safety Conference held here last spring.

There is no necessity for another national conference Secretary Hoover announced, as the national program has been adopted and it remains for the states to ratify the work already done and carry out the program. That such program will be carried forward has been announced, the Secretary stated, by 12 states which have asked that the Department suggest a tentative program as a working basis for the states.

## Mexico Drops Invoice Fee

WASHINGTON, July 15—A Mexican decree, effective July 3, abolishes the 5 per cent consular fee on invoices covering shipments of parts and materials for constructing automobiles and trucks, dutiable under item 633-F of the tariff, according to a cablegram received in the Department of Commerce from Acting Commercial Attache George Wythe at Mexico City.

# Industry Prepares For I. C. C. Hearings

## Further Organization Meetings to be Held in Chicago—Seeks Definite Data

NEW YORK, July 14—Work on preparing a complete and effective presentation of the motor truck and bus industry's point of view on problems of regulation and competition with rail carriers, for the information of the Interstate Commerce Commission, in the first of the series of hearings on commercial motor carriers to be held in Chicago, July 27, is proceeding at a rapid pace.

In Chicago, Washington and New York, experts on various phases of the matter are gathering data and conferring with manufacturers, operators and shippers. Attention is being concentrated on Chicago, however, and another organization meeting of the motor group will be held there next week following the preliminary meeting of a week ago.

The motor industry is keeping an open mind on the general subject of regulation, feeling that sufficient information is not available as the basis of a definite opinion and feeling, furthermore, that the operator and shipper are the ones who should decide the question, and that the manufacturers feel that if any regulation is attempted it should not be of a character to restrict the development of truck and bus common carrier operation.

## Tax Revision Hearings Off Until Next Congress

WASHINGTON, July 14—The probability that the automobile and other industries, interested in taxation reduction, would get a hearing this summer before the Joint Congressional Committee on Internal Revenue Taxation, was dissipated here this week with the announcement by Chairman W. R. Green that no hearings will be held until Congress reconvenes in December.

Hearings at that time, the chairman declared, while open to any class of taxpayers who might desire to be heard, would be directed primarily to administrative features of the present bill and not towards tax revision. Further reduction of the 3 per cent automotive tax, before December of next year, it was intimated, is not likely, when the new Congress must take up taxation legislation which will be recommended to it by the Joint Congressional Committee, of which Rep. Green is the head.

## To Sell "Romar" Bumpers

CLEVELAND, July 14—The newly organized Martin Distributing Co., former here by W. F. Martin, will market a complete line of bumpers under the trade name "Romar." The company will also maintain a branch office at Syracuse.

# Automotive Buying Features Steel Trade

## General State of Steel Market Shows Diminished Buying —Prices Hold Firm

NEW YORK, July 15—Buying of hot-rolled strip steel features the automotive demand for steel. Some of the Mahoning Valley hot-rollers are operating to capacity. Automotive demand for cold-rolled strip steel has also improved. Sheets for immediate shipment have been sought by some automotive consumers, especially so full-finished body stock. There is also somewhat more breadth to automotive demand for alloy steels.

But, while automotive buying of steel makes a very gratifying showing, the general state of the steel market is not quite as roseate as Wall Street portrayals would make it appear. The leading interest's unfilled tonnage statement for June 30, made public on Saturday, shows that what the Corporation has left of its backlog of orders consists chiefly of rail tonnage, and this will be eaten into heavily during the next six weeks.

A real change in the market's statistical position is hardly to be looked for before fourth-quarter buying makes itself felt in September. In spite of all the bouquets that spokesmen for the steel industry are handing to the market, it may be said that prevailing steadiness of prices is rather due to lack of more animated demand than to plentitude of orders.

With steel consumers continuing to buy in relatively small tonnages and only, as their manufacturing schedules call for material, the incentive to carry on intensive price negotiations is wanting. Independent sheet rollers are continuing efforts for a readjustment of gage differentials with a view to lowering prices for heavy-gage sheets and raising those for the light gages.

**Pig Iron**—What little demand emanates from automotive foundries is for single car lots. The market is semi-dormant, but prices are being held fairly steady.

**Aluminum**—Latest information is to the effect that the sole domestic producer will begin operating the new Saguenay River plant in September. A good part of the output is expected to come to the United States. European markets are cabled as being rather dull, and, while routine demand in the New York market is well maintained, the spectacular inquiry for metal which prevailed a few months ago has subsided. Imports continue along the quantitative lines that have been in evidence for some time. The market for secondary metal is steady.

## Motorcycle Output Lower

WASHINGTON, July 14—The biennial census of motorcycle manufacturers of the United States, just announced by the U. S. Census Bureau, show that in 1925 there were ten concerns producing 39,340 motorcycles, valued at $8,873,917; parts, including side cars, valued at $3,456,264. Production in 1925 showed a decrease of 6.1 per cent in number and 11.5 per cent in value as compared with 1923, the last preceding census, and the total value of products of the industry decreased 17.7 per cent from the corresponding total for 1923.

# Rim Production Off 338,417 in 6 Months

CLEVELAND, July 12—Production of rims continues below last year's figures, the Tire & Rim Association of America reports. During June there were 2,110,035 rims inspected as against 2,124,300 in June, 1925, and 2,178,947 for May of this year. Total rims inspected during the first six months of 1926 were 13,195,577 as against 13,533,994 for the first half of 1925.

Production totals for June in principal sizes were as follows:

| SIZE | June, 1926 | June, 1925 |
|---|---|---|
| **Clincher** | | |
| 30 x 3½ | 165,069 | 388,810 |
| **Balloon** | | |
| 28 x 3½ | 921,237 | 743,829 |
| 28 x 4 | 298,531 | 199,427 |
| 29 x 4 | 295,374 | 159,231 |
| 30 x 4½ | 88,650 | 136,598 |
| 30 x 5 | 12,992 | 43,111 |
| 31 x 5 | 42,716 | 57,363 |
| **High Pressure** | | |
| 30 x 3½ | 18,105 | 54,236 |
| 32 x 4 | 3,357 | 23,467 |
| 32 x 4½ | 47,586 | 56,717 |
| **Truck "20"** | | |
| 30 x 5 | 87,673 | 64,459 |
| **Truck "24"** | | |
| 36 x 6 | 3,872 | 3,320 |

## Light Sheet Steel Prices to Increase in New List

YOUNGSTOWN, July 12—President James A. Campbell of the Youngstown Sheet & Tube Co., mentions the automobile industry as one which is operating at a better rate and consuming more steel than expected for this season, earlier in the year. "It should be the slack time now for the automotive industry," he states. "Yet I have found and was told by prominent makers and parts manufacturers that orders are better, twice better, than a year ago."

He advises that independent sheet makers are revising the price structure, so as to reduce the differentials between the lighter and heavier gages, and establish higher quotations for the lighter stock. This is being done to make all sheet gages profitable to roll, he states. The new lists will become effective Aug. 1.

## Hercules Builds 175 Daily

EVANSVILLE, IND., July 10—C. W. Sanford, superintendent of the Hercules corporation plant, reported production of Chevrolet, Ford and Graham Brothers truck bodies at 175 a day, which is largely concentrated on Chevrolet.

# Steel Treaters Set Convention Program

## Annual Meeting of Society on Second Day—Large Exposition Feature

CLEVELAND, July 12—The national meetings and papers committee of the American Society for Steel Treating, composed of Earl Smith of the Central Steel Co., chairman; H. M. Williams, Delco Light Co.; J. H. Nead, American Rolling Mills, and Ray T. Bayless, editor of Transactions of A. S. S. T., secretary, has adopted the program for the convention of the society, and the Eighth National Steel & Machine Tool Exposition to be held in Chicago the week of Sept. 20.

The exposition will occupy the entire capacity of the municipal pier, all of the available exhibit space of which has been reserved. The technical sessions will be held in the Drake Hotel, which is convention headquarters.

On the opening day, Sept. 20, technical sessions will be held morning and afternoon. On Sept. 21, technical sessions will be held morning and afternoon, with a metallurgical educational luncheon at noon followed by plant inspection. The grand ball will be in the evening.

On Sept. 22 the annual meeting of the society will be held as the opening event, followed by the E. D. Campbell memorial lecture. Plant inspections will open the afternoon with technical sessions following. The smoker and annual frolic will be held in the evening. On Sept. 23, technical sessions will be held morning and afternoon with the annual banquet in the evening. On Sept. 24, the closing day, technical sessions will be held morning and afternoon with plant inspection at noon.

The exposition will open at noon Sept. 20 and will be open from 10 a.m. to 10 p.m. daily with the exception of 22nd and 23rd when it will be open from 10 a.m. to 6 p.m., the official closing being at 10 p.m. of the 24th.

## Rolled Steel Orders Higher

YOUNGSTOWN, July 12—The Newton Steel Co., principal producer of highly finished sheets in the Youngstown district, is operating at 80 per cent with 16 of its 20 mills at Newtown Falls under power. Ninety per cent of the company's output is devoted to automobile body sheets.

President John T. Harrington of the Trumbull Steel Co. advises that orders for rolled steel, principally from the automotive trade, were 25 per cent greater for the first eight days of July than for the corresponding June period, with June gross business 25 per cent ahead of May.

## Open Akron Fabric Plant

AKRON, July 12—Cord tire fabric is now being manufactured in Akron by Russell, Farley & Co., in a building 60 x 100 feet, just constructed.

# World Road Congress Outlines Activities

## Exhibition Will Contain General Highway Building and Maintenance Equipment

LONDON, July 10 (*By Mail*)—The Fifth International Road Congress, which will be inaugurated at Milan on Sept. 6, and closed at Rome at the Campidoglio, and the International Road Exhibition, which will complete it and be opened on Sept. 1, likewise at Milan, in the grounds of the Sample Fair, remaining open till the end of the Congress, together form one of the world's most important technical events to be held during the present year.

All the nations have been invited by the Italian Ministry of Foreign Affairs to participate in both the Congress and the Exhibition, so that a great gathering of official delegates from the various Governments, specialized technicians and industries interested in the solution of problems relating to the construction and maintenance of roads, from every part of the world, is foreseen.

The Congress will deal chiefly with the following questions:

Concrete roads, bituminous and asphalt surfaces, standardization of tests for coal tar, bituminous and asphalts used in road construction. Census of traffic, development and planning of towns in relation to traffic interests and motor roads.

The exhibition will include the following sections into which the materials to be shown by the public administrations and private firms will be divided:

1—Public Administrations. Corporations. Special Institutes. Road service organization in the various States and the Local Administrations. Road Engineering institutes. Propaganda and Touring organizations (Touring Clubs, Motor and Motor Cycle Clubs, Leagues for the mitigation of the dust nuisance, etc.).

2—Fixed Plant for the production and working of road materials and for the destruction of road refuse.

3—Mobile machinery for the preparation or renewal of road surfaces; for the production, working and placing in position of road materials; for the maintenance and cleaning of the roads.

4—Materials employed, both in the construction and maintenance of the roads.

### To Show Construction Work

5—Application of materials used in road construction and maintenance: block pavements; concrete; macadams; pavements; road accessories such as hydrants, clappers; street lighting.

6—The vehicle and the roads—rims and types of tires; suspensions; shock absorbers; brakes; headlights and front lights; acoustic signals, speed and stop indicators; anti-splash devices and contrivances against the raising of dust; buffers.

7—Tramways (foundations, pavements and rails): overhead lines in relation to street.

8—Motor buses for town and country roads.

9—Indicators for road traffic (signs posts, safety devices at railway level crossing and methods of regulating traffic in crowded cities).

10—Measuring and testing apparatus for experimental roads: laboratory sampling and testing apparatus.

11—Road evolution; the road in the great war; the modern road; the road of the future; road embellishment.

12—The press and the road technical and touring.

The United States which as is well known has given the lead in solving problems connected with modern roads, has already applied for space, while very important reports drawn up by the distinguished technical men and specialized administrators, are continually arriving for the Congress.

## Fiat Opens Paris Branch to Push French Business

PARIS, July 3 (*By Mail*)—Fiat interests in France, which for the past twenty years have been in the hands of a distributor, were this week taken over by a new organization with the title "Societe Anonyme Francaise des Automobiles Fiat," which is virtually a branch of the parent company at Turin, Italy. This move is in accordance with the general Fiat policy, the firm having, during the past few years, established its own branch selling organizations in Argentine, Spain, Switzerland, Poland, England, Turkey and Greece.

It is expected that this change will mark the inauguration of a much more active campaign on the French market, for up to the present Fiat sales in France have been proportionately lower than in other European countries.

## Renault Engine in Plane Making Paris-Persia Trip

PARIS, June 30 (*by mail*)—In their record flight of 2730 miles from Paris to Bassorah (Persia) the Arrachart Brothers used a new type of 550 h.p. Renault 12-cylinder engine in a Potez biplane. The machine has a wing spread of 55½ ft., a length of 32.8 ft., and a surface of 678 sq. ft.

The Renault engine is a development of the firm's 450 h.p. model, with 12 cylinders at 60 degrees having a bore and stroke of 134 by 180 mm. (5.26 by 7.08 in.) driving a geared down propeller and developing 600 h.p. at 2000 revolutions. The engine was fitted with two duplicate Zenith carbureters and carried a provision of almost 1000 gal. of gasoline and 50 gal. of lubricating oil, this being sufficient for 30 hours flight.

## Get Air Photograph Patent

CLEVELAND, July 12—Howard L. Doremus, an engineer with the Jordan Motor Car Co.; Max W. Garnett, city engineer of East Cleveland; Edwin H. Corlett, now with the Fairchild Aerial Surways Co., of New York, have been granted a patent on a process of making aerial photographs. The novelty of the patent is that the different elevations indicated in aerial photography because of the fact that the nearer to the camera the larger it appears have been corrected to bring them to a uniform scale.

# Nash Distributes $5,460,000 in Cash

## Increased Dividend Basis Also is Made Effective—Business Nearly Doubles 1925

NEW YORK, July 10—Rapid expansion of Nash Motors Co. has brought the cutting of another melon for stockholders. Directors yesterday declared a semi-annual dividend of $1 a share on the common stock of no par value, and also $1 a share extra dividend, the total distribution amounting to $5,460,000 to stockholders on Aug. 2.

At the same time it was decided to place the stock on a regular 50 cents quarterly dividend basis, and if the extra 50 cents a quarter is continued the stock will be paying double the rate expected by President Charles W. Nash at the time of the split-up last February, which had the effect of making 2,730,000 common shares outstanding instead of 300,000.

It was also announced that June sales of Nash motor cars were 63.7 per cent above the same month last year, bringing the total volume of the first six months of 1926 to 88.3 per cent above the sales mark for the first half-year period of 1925, and to 81.3 per cent of the total sales of the entire year of 1925. The record of actual production figures of Nash since 1921 tells the story of this company's remarkable growth:

| | |
|---|---|
| 1921 sales | 20,850 cars |
| 1922 sales | 41,652 cars |
| 1923 sales | 56,677 cars |
| 1924 sales | 53,626 cars |
| 1925 sales | 96,121 cars |
| First 6 months 1926 | 78,172 cars |

Stockholders of the company have participated liberally in the profits during the last few years. In 1918 they were paid $21 a share. Then for three years the rate was $16, but in 1922, besides the cash payment, they received three shares of preferred A and four shares of common for each common share held. On the basis of this new capitalization, the cash rate was reduced to $6 a share in 1923, but $10 a share was paid in 1924, including a $3 extra. In 1925, $16 was paid, including $9 extra, and early this year stockholders received a 900 per cent stock dividend.

### McCarty Named Director

The company reported that for the second quarter of the 1926 fiscal year, covering the three months ended May 31, the net consolidated income of the Nash company and its subsidiaries was $6,010,824, making the total earnings $10,148,336 for the first six months.

Announcement was also made of the election of Earl H. McCarty, Kenosha, and George C. Lee of Lee, Higginson & Co., Boston, as directors.

Charles W. Nash, president of the company, expressed himself as satisfied with the soundness of general business and with prospects for continuance.

# Arbitration Board Selected by N.S.P.A.

DETROIT, July 12—In order to establish an arbitration tribunal which will provide effective facilities for the amicable adjustment of all business controversies in which its members may become involved, the National Standard Parts Association has appointed an arbitration committee as follows:

Jobbers—John R. Stanley, Stanley-Brandt Co.; E. A. Henderson, Henderson Bros.; L. T. White, Motor Bearings & Parts Co.; W. H. H. Childs, P. D. Q. Co.; F. H. Carlisle, Replacement Parts Co.; L. H. Ward, Buffalo Bearings Co.

Manufacturers—W. B. Huber, W. B. Huber & Co.; B. R. Winborn, Detroit Steel Products Co.; F. J. Glennon, Kant Skore Piston Co.; L. A. Dall, Dall Motor Parts Co.; S. M. Prior, Fafnir Bearing Co.; and E. A. Ewing, Ochrome Valve Co.

Rules of procedure have been adopted and were prepared expressly for the association by the American Arbitration Society of New York.

## Martin Business Exceeds Present Plant Capacity

CLEVELAND, July 12—The City Council has stepped forward to help the Chamber of Commerce retain the Glenn L. Martin Co.'s airplane factory for Cleveland. Detroit is attempting to secure the plant for that city and Mr. Martin announces that orders on hand makes the present plant too small and that it will be necessary to move although he does not indicate that he will leave Cleveland.

City Council leaders announce that they will favor offering a large part of the Cleveland airport of 1000 acres on Brook Park road to the Martin company at a low lease figure. At present the city leases a total of two acres for hangars used by the air mail service and to the Ford interests.

Cleveland will be one of the stops in the airplane reliability tour test which starts from Detroit Aug. 7. City Manager W. R. Hopkins and Glenn L. Martin have notified H. J. McCarroll, of Detroit, who is managing the tour that Cleveland would provide $1000 as prize money as well as gasoline, oil and hotel accommodations free to pilots.

## Chevrolet to Reorganize New England Territory

BOSTON, July 12—An important change in automobile distribution channels here will become effective Aug. 1 when William C. Sills will retire as Chevrolet distributor for the entire New England territory. The Chevrolet Motor Co. will take over the Sills-Chevrolet Co. with all its dealer organization and will reorganize it by placing the territory under factory control with direct dealer franchises.

The New England territory is practically the only remaining territory in the United States in which Chevrolet cars were sold through a distributing organization. In all other districts sales have been under the general sales department of the company for the past five or six years with direct dealer contracts obtaining.

Mr. Sills who has been head of the distributor organization here, formerly was general sales manager of the Chevrolet company and also held other high posts in the General Motors organization. He retired toward the end of the Durant regime to become New England distributor. Following his retirement from active business Mr. Sills plans an extensive yachting trip.

## Yellow O-5 Cab Down $150

CHICAGO, July 12—A reduction of $150 in the price of the sedan type model O-5 taxicab was announced this week by the Yellow Truck & Coach Mfg. Co. At the same time he announced that generators, formerly priced at $50 extra will now be standard equipment on this model cab. In effect, this means a total reduction in the price of the O-5 cab of $200.

The reduction, Mr. Ritchie stated, makes the new list price of this vehicle $2450 f. o. b. Chicago.

# *Financial Notes*

**Thompson Products Co.,** stock formerly the Steel Products Co., extensive makers of valves and fittings for the automotive industry, will be listed on the Cleveland Stock Exchange. Shareholders are being notified to send certificates in to the Union Trust Co. for exchange into certificates bearing the new name.

**Curtiss Aeroplane & Motor Co., Inc.,** yesday placed the participating preference stock on $7 annual basis by declaration of a semi-annual dividend of $3.50 a share, payable Sept. 1 to stockholders of record Aug. 16. Heretofore the mid-year dividend was only $2.50. This increase absorbs the full 7 per cent preference value of the stock, but under the participating feature it shares with the common stock in additional earnings up to 42 per cent. There are 25,231 preference shares outstanding. In view of the action of the directors, the semi-annual statement of the company, which has not yet been prepared, is expected to show a material increase in earnings.

## C. G. Minority Interest Sold to New York Bankers

NEW YORK, July 13—Purchase of a minority interest in the C. G. Spring & Bumper Co. has been made by Noyes & Jackson, investment bankers here. No new financing is involved but the purchasers will soon offer 27,000 shares of the company's stock privately at $14 a share. Application has been made to list the stock on the New York Curb Exchange. Capitalization of the company consists of 160,168 shares of no par common stock and $449,000 of $10 preferred stock. The balance sheet as of May 31, carries the common stock at $328,062 with a surplus of $1,013,707. Current assets as of May 31 were $1,126,863 and current liabilities, $536,997.

## Watson Vacation July 31

PHILADELPHIA, July 13—The John Warren Watson Co. will close practically all departments on July 31 for two weeks vacation.

# *Developments of the Week in Leading Motor Stocks*

NEW YORK, July 15—Gradual steadying of motor stocks at prices approximating those ruling for the past several weeks showed general confidence of investors in the continuing prosperous condition of the industry. Some stocks, notably General Motors rose to new heights during the week, establishing a high of 158 at which it resisted all efforts toward selling off.

The continued advance in General Motors from around 120 is regarded with something like admiration in the Street because of the success of the pool which has handled it. So remarkable have been the actions of this stock that it is generally credited with having taken market leadership away from U. S. Steel for the time being at least.

For the most part other motor stocks have maintained much the same levels as in recent weeks. The special dividends in Packard failed to arouse any special upward movement in this stock, possibly because of expectancy that larger extras might have been declared in view of the company's strong cash position and its high earning rate. Reaction to special Nash dividends were considerably more favorable and some upward movement in Hudson and a number of other stocks was noted in expectancy of a rise following new model announcement.

Talk of new mergers in the industry continues, one important company which has been mentioned several times in the past few weeks in this connection, being reported to have suspended all advertising pending completion and announcement of a merger in which it was a party.

Little action was noted in the tire stocks following the announcement of price reductions. Possibility of litigation to compel Goodyear to meet accumulated dividends on preferred stock was presented through action of stockholders who are opposed to retirement of preference issues before back dividends have been met.

Motor truck stocks maintained the general strength evidenced for the past several weeks. Little change was noted in the equipment divisions.

# Mexican Railway Buys Truck Fleet

## Plans to Forestall Competition by Private Operators—Road Building Active

LAREDO, TEXAS, July 10—As a means of forestalling any future private competition in the way of motor truck transportation, the National Railways of Mexico will establish its own system of covering short hauls by this method. It has just received its first shipment of 25 motor trucks from the United States which it will place in service between points in the territory immediately adjacent to Mexico City, where there is a density of industries.

The operation of these trucks is more or less in the nature of an experiment, and if they come up to the present expectations of the officials of the National Railways, a large number of additional ones will be purchased and placed in service on the highways in various other parts of the country, it is stated. Motor trucks are coming more and more into use in the more remote mining camps for hauling ore from the mines to the smelters and to railroad shipping points.

The construction of trunk highways between Mexico City and Nuevo Laredo and between the capital and Vera Cruz has stimulated the building of a number of lateral roads. The cost of these are borne for the most part by the communities which they are intended to serve. They offer an opportunity, however, for the economical operation of motor trucks and are valuable feeders for both the railroads and the trunk highways.

It has been amply proved that the average Mexican Indian is an adept when it comes to acquiring a quick understanding of the mechanical handling of a motor truck. In South Texas most motor truck drivers are Mexicans, and they are used exclusively in Mexico in this work. It is explained that they seem to have a natural bent for mechanics and are first class shop men.

## Court Ruling Curbs Private Bus Lines

SPRINGFIELD, Ill., July 10—The decision of the Supreme Court in a recent appeal of the Louisville & Nashville railroad against the Egyptian Transportation Co., a southern Illinois motor coach operating concern, that the State commission erred in granting the bus line permit to extend service in territory of the railroad and that whenever such additional transportation service is needed in a community already served by a railroad the rail line must be ordered to supply it, has been viewed by motor bus operators of the State with distinct alarm. They believe that it will be the first step in the campaign which may drive them out of business.

With this view shared by the leading motor bus interests, the Illinois Motor Bus Transportation Association has gone into the case and will argue the point before the commerce commission at a rehearing granted this week. The bus lines plan also to ask the commission to determine officially the status of bus lines being operated by the rail lines, whether they are to be considered as independent carriers or an integral part of the railroad.

# Argentina Turns to Better Priced Cars

DETROIT, July 10—The American automobile manufacturers should devote more attention to developing the South American market, was the opinion expressed in an interview here, by R. N. Lagow of Buenos Aires, who has spent several years in South America merchandising motor cars.

"South America, with two or three exceptions among the American manufacturers, has been more or less neglected from the standpoint of application of American merchandising and financing methods," Mr. Lagow declared.

"A survey of sales figures for Argentina, which now has approximately 200,000 cars for a population of 10,000,000 people, or an average of one car for every 50 people, shows that the present trend has been to purchase the cheaper class of automobile.

"In 1924, when 34,760 American cars were sold, as against 927 European cars, in Argentina, about three-fourths of them were in the low priced class. During 1925, when 52,989 American cars were sold against 1676 European cars, a similiar ratio existed.

"While the figures show an unusual demand for the cheap car, the trend is away from cheaper machines and the large field of cheap car owners presents a tremendous field of prospects for better cars in the future."

In Mr. Lagow's opinion the automobile business will continue to be good in South America, and American manufacturers can largely regulate their volume of sales by the efforts they make to study the particular conditions as they exist, and then adopt sales policies to fit the situation. The American plan of selling, he said, is proving very popular there.

## Rail Line Plans Bus Use

LINCOLN, NEBR., July 10—The Lincoln Traction Co. has asked authority of the state railway commission to abandon service on two of its poorest paying street car lines and substitute motor buses instead. The traction line told the council this would be the first step in an experiment to curtail the constant decrease in the number of car riders. The fare will be the same as the usual fare on the street car line—10 cents.

## Kelsey Declares Dividend

DETROIT, July 10—Kelsey Wheel Co. has declared a dividend of $1.75 a share on its preferred stock, payable Aug. 2 to stock of record July 21.

# South Africa Drops Enforced Insurance

## Insurance Companies Defeat Clause by Indicating Opposition to Risks

JOHANNESBURG, SOUTH AFRICA, June 15 (*by mail*)—The Transvaal and Natal legislatures have decided to drop the compulsory insurance clause of the new motor ordinances. This action is due to powerful representations made by a deputation of delegates from insurance companies of the Union of South Africa. Originally the ordinance before the Transvaal Provincial Council limited compulsory insurance to the drivers of taxis and motor omnibuses. The insurance companies, it is understood, do not make a challenge to the principle of compulsory insurance—they only are influenced by what they consider to be the insuperable difficulties that will be in the way of putting the proposition across.

In the case of taxis the difficulty of making insurance compulsory is due to the fact that very few companies, if any, will issue a policy for this class of risk. It is contended that it is almost impossible to insure vehicles plying for hire in the cities, as what is called the "moral hazard" is said to be too great. Then came the proposal to extend the compulsory insurance to all motor drivers. This, according to the insurance companies, increased the difficulties, and their arguments have been sufficiently powerful to cause the deletion of the clauses.

### Companies Have Black List

The "black list" possessed by all insurance companies formed one of the chief arguments in favor of withdrawal of the proposals. It was pointed out that many citizens, although perfectly trustworthy, are unfortunate and have had a series of accidents. Others are reckless, and will not be accepted by the companies. A few are deliberately dishonest, and insurance for them is impossible. It was pointed out that if the Transvaal Province passed the compulsory insurance clause it would not in any way apply to a motorist from the Cape Province, or the Orange Free State who was involved in an accident in the Transvaal. Thus it would be inequitable if the compensation payable to a person involved in an automobile accident in the Transvaal depended upon the Province of the Union in which the car was registered. Difficulties would have arisen and the scheme was felt impracticable.

A remarkable record run from Capetown to Johannesburg has just been accomplished by a Chrysler car. This stock model six covered the distance of between 900 and 1000 miles at an average speed of 37 m.p.h., the time taken being 26 hours 13 minutes—three hours and 32 minutes faster than the Union Limited, South Africa's crack long distance train. The train distance is only thirty or forty miles longer.

# Harvester Increases Moline Properties

MOLINE, July 10—The International Harvester Co., which is equipping the factory recently acquired from the Moline Plow Co., for manufacture of its line of implements, has begun negotiations for the purchase of a 60-acre tract in East Moline and the acquisition of a six-story warehouse as well as railroad trackage facilities there. The East Moline site is being taken over with idea of future expansion and the Moline warehouse to provide storage facilities.

When the tractor plant gets in operation it is expected to employ about 1000 men with prospect of increasing this number when production is at capacity.

International Harvester officials have also entered negotiations with the U. S. Engineers office relative to the possibility of use of the Mississippi River as carrier for raw materials and finished products, contemplating harbor facilities at its Rock Island plant, which is on the arsenal water shore. The channel is sufficiently deep there for river barges and tugs but viaducts and crossings in the vicinity will prevent larger boats from reaching the landing.

## Tucker Finds Crops Good

CLEVELAND, July 12—Crop conditions in the southwest are reported as favorable for a very prosperous year for the farmers in that territory by C. A. Tucker, general sales manager of Peerless Motor Car Corp. who has just returned from a trip through that section. The company plans to expand its dealer representation largely in this territory because of the promising good business conditions.

***Coming Feature Issue of Chilton Class Journal Publication***

**Sept. 30—Automotive Industries Annual Production Issue**

## Parker Truck Reorganizes; Brings Out New Models

MILWAUKEE, July 10—Parker Truck Co. has been reorganized with J. Grossman as general manager and is announcing the production of a new line of trucks rating from 1 ton to 3½ tons capacity. Leading the line is the "Chariot" 1-ton speed truck powered with a Wisconsin model SU engine, which develops 50 hp. at 2000 rpm. A Timken bevel-gear axle is used with 6 3/7 to 1 reduction, giving a road speed of 45 miles an hour.

The rest of the line includes the "Junior" 1½ ton model, and also 2½ and 3½ ton heavy-duty models. As in the light truck, Wisconsin engines and Timken front and rear axles are used in the larger models.

## Field Sale Approved

OWOSSO, MICH., July 10—Field Body Corp. stockholders have voted to inform the Circuit Court of their approval of the sale of the plant and equipment to the Grand Rapids Body Co. for $121,000. Creditors, through an attorney, have filed a protest against the sale on the grounds that the property was sold as a unit and not in parcels. Stockholders contend there is not a chance for them to ever realize on their investment and are willing to step aside and let the Grand Rapids concern operate the plant.

# Iowa Abandons Plan for Road Bond Issue

DES MOINES, July 10—Plans to call a special session of the Iowa general assembly to authorize a vote at the November general elections on the proposed $100,000,000 bond issue to provide a system of hard roads in the State have been abandoned. The legislative committee advocating the session last week gave up hope to secure sufficient signatures to a petition to the governor to call the session.

Volney Diltz, secretary of the committee, announcing the failure of the project attributed it to three reasons: lack of time to go over the proposed legislation with all members; because members of the general assembly in "those parts of the State that need roads more than any other, failed to respond," and because "in a few counties, where the people this year voted bonds, showing beyond doubt that they favor the proposed legislation, their representatives in the general assembly failed to sign the petitions."

## Buffalo Used Car Sales Gain

BUFFALO, July 12—Dealers' figures indicate that used car sales here in June totaled fully $7000 more in volume than in June, 1925. New car sales were 5 per cent greater than in June, 1925, bringing the gain of 16.33 per cent average gain for the first five months of the year down slightly at the close of the sixth month.

In the first five months of 1923, 11,400 new cars were delivered in Buffalo. That was the record peak for all time but the new car business for the first five months of 1926 fell but a few cars short of the peak.

# *Calendar of Coming Events*

### SHOWS

**Batavia, Java** ..... July 31-Aug. 6
Exhibition, Botanical and Zoological Garden at Weltervreden.

**Boston, Mass.** ..... Sept. 27-Oct. 2
Radio Exposition, Mechanics' Bldg.

**Brussels** ..... Dec.

**Buenos Aires** ..... Dec. 7-20
Ninth Argentine Automobile Show, Palermo Park.

**Chicago** ..... Sept. 20-24
National Steel and Mechanical Tool Exposition, Municipal Pier, American Society for Steel Treating.

**Chicago** ..... Sept. 27-Oct. 2
National Radio Exposition.

**Chicago** ..... Nov. 8-13
Coliseum, Automotive Equipment Association.

**Chicago** ..... Nov. 15-19
Hotel Sherman, National Standard Parts Association.

**Chicago** ..... Jan. 29-Feb. 5
National, Coliseum, National Automobile Chamber of Commerce.

**Cleveland** ..... Oct. 4-8
Public Auditorium and Annex, American Electric Railway Association.

**Lima** ..... July 28
First Peruvian Automobile Show, Peruvian Touring Club.

**London** ..... Oct. 4-9
Olympia Motor Cycle.

**London** ..... Oct. 21-30

**Milan** ..... Sept. 1-20
Exposition.

**Milan** ..... Sept. 6-13
Fifth International Road Congress.

**New Haven** ..... Sept. 7-10
Machine Tool Exhibition.

**New York City** ..... Sept. 13-18
Radio World's Fair, Madison Square Garden.

**New York** ..... Jan. 8-15
National, Grand Central Palace, National Automobile Chamber of Commerce.

**Paris** ..... Oct. 7-17
Auto Salon, Grand Palais.

**Paris** ..... Dec. 3-19
International Aeronautic Exposition, Grand Palais.

**Prague** ..... Sept.

**San Francisco** ..... Aug. 21-28
Pacific Radio Exposition, Exposition Auditorium.

### CONVENTIONS

American Electric Railway Association, Public Auditorium and Annex, Cleveland ..... Oct. 4-8

American Society for Steel Treating, Municipal Pier, Chicago ..... Sept. 20-24

Associated Manufacturers of Fabric Auto Equipment, Inc., La Salle Hotel, Chicago ..... Nov. 13

**Automotive Equipment Association, Coliseum, Chicago** ..... Nov. 8-13

**National Association of Automobile Show and Association Managers, Drake Hotel, Chicago** ..... July 27-28

**National Standard Parts Association, Hotel Sherman, Chicago** ..... Nov. 15-19

**National Tire Dealers Association, Inc., Memphis, Tenn.** ..... Nov. 16-18

### S. A. E. MEETINGS

**National**

**Boston, Nov. 16-18, National Transportation and Service.**

**Chicago, Sept. 21-23, Production Engineering, Hotel Sherman.**

**Philadelphia, Sept. 2-3, Aeronautical.**

### RACES

Altoona ..... Sept. 6
Atlantic City ..... Sept. 25
Charlotte, N. C. ..... Aug. 23
Dallas, Texas ..... Nov. 11
Laurel, Md. ..... Oct. 23
Los Angeles ..... Nov. 25
Philadelphia ..... Sept. 4-11
National Air Races.
Salem, N. H. ..... Oct. 12